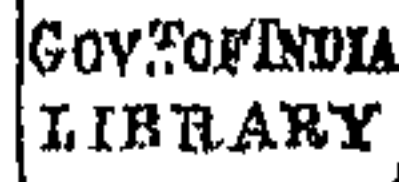


OBSERVATIONS
ON
IDIOPATHIC DYSENTERY.

OBSERVATIONS

ON



IDIOPATHIC DYSENTERY,

AS IT OCCURS IN EUROPEANS IN BENGAL,

PARTICULARLY IN REFERENCE TO

THE ANATOMY OF THAT DISEASE.

BY WALTER RALEIGH,

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AT THE MEDICAL COLLEGE.

FORMERLY, SURGEON TO THE GOVERNOR GENERAL OF INDIA.
(FIRST ASSISTANT) SURGEON GENERAL HOSPITAL—EYE INFIRMARY, & CO. LTD.
CALCUTTA.

"There is something in the experience which a Surgeon acquires at the bed-side of the sick, that is worth every thing else; you may be excellent anatomists and physiologists, but if you have not watched disease in the wards of an Hospital, or at the bed-side of the patient, you will not understand your profession."—*Sir Ashley Cooper's Lectures,--Lancet.*

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TO THE RIGHT HONORABLE

WILLIAM PITT, EARL AMHERST,

ETC. ETC. ETC.

MY LORD,

The following pages are the Gleanings of fifteen years' practice in the largest European and Native Hospitals in India; they are by some of my professional Brethren, whose opinions I value, considered worthy of publication, and in hope of their proving to be so, I avail myself of the opportunity of dedicating this little volume to your Lordship, in grateful acknowledgment of great benc-

fits and kindness received, during the period that I had the honor of being the Medical Attendant of your Lordship and Family, on your Lordship's Personal Staff, when Governor General of India.

I have the honor to subscribe myself,

MY LORD,

Your Lordship's

Obliged and Humble Servant,

WALTER RALEIGH.

Calcutta, Sept. 10, 1842.

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P R E F A C E.

IN publishing this ~~Essay~~, I have no intention of presenting the reader with a methodical Treatise on Dysentery, of which there are so many already before the public; but my object is, if possible, to establish on careful post mortem examinations, the true seat and nature of that disease; to classify more nicely than has heretofore been done, the different stages of inflammation which prevail from time to time, in that ailment, and to lay down some signs for distinguishing the one grade from the other, by

assimilating particular phenomena and symptoms of the complaint, with certain morbid changes of structure in the colon; thereby affording opportunity for the application of suitable remedies, to the several degrees of intensity of the malady.

No man who had studied diseases of the eye, would treat every inflammatory affection of the conjunctiva in the same way; on the contrary he would observe especial caution in ascertaining the character of the prevailing inflammation, whether it was in the acute, chronic, or irritable condition, and having made up his mind on this important preliminary point, he would prescribe remedies applicable, (though by no means similar,) to the one, or the other. If therefore, inflammation of the mucous membrane of the eye and eye-lids assumes different dispositions and shades, there can be no question but that the same varieties of disease prevail in the mucous tissue of the colon, under in-

flammation; and the symptoms during life, and the morbid appearances observed in those who have died of Dysentery, in my opinion, are sufficiently confirmative of this fact.

It is an old adage, that “there is nothing new under the sun,” and it is more than probable that many of the observations I have made, may have been adverted to by some of the many persons who have written on Dysentery; should that be the case, I shall have the consolation of feeling, that I have by my experience confirmed the correctness of their statements; but I trust I shall be exempted from the imputation of plagiarism, when I assure the reader, that in drawing up this paper, I have consulted no other work than Nature. I am fully sensible of my deficiency as a writer; but if I shall have succeeded in making myself understood, it is all I aim at.

W. R.

Calcutta, Sept. 10, 1842.

IDIOPATHIC DYSENTERY.

OBSERVATIONS ON IDIOPATHIC DYSENTERY;
AS IT OCCURS IN EUROPEANS IN BENGAL,
PARTICULARLY IN REFERENCE TO THE
ANATOMY OF THAT DISEASE.

OPPORTUNITY can seldom be afforded for examining the condition of the parts involved in disease during the earlier stages of dysentery, and our observations are, consequently, for the most part, confined to an investigation of the extreme results of this fatal malady.

Unsatisfactory as this circumstance is in a pathological point of view, the obscurity of the

progress of dysentery, through its first gradations, is perhaps less to be lamented than in that of most other complaints of formidable character ; because from the symptoms of the disease, and the appearances presented on examination after death, we can, from analogy, come to a tolerably conclusive idea of the nature of the mischief that has been going on during the earlier stages of the affection. We thus arrive at a pretty decided opinion, that Idiopathic Dysentery is nothing more or less than common inflammation of the mucous membrane of the large intestine ; that there is nothing specific or peculiar in the character of the inflammation ; and that it takes precisely the same course as common inflammation of the mucous membrane usually follows wherever situated ; that it assumes just as many shades of difference in intensity, between the most acute and the most inert conditions of inflammatory action, in the lining membrane of the colon, as it does in the same tissue in other positions ; and consequently, that for its cure, it requires a variation of treatment

adapted to the degree of intensity which may prevail from time to time, through the course of the disease.

The peculiar functions performed by the secreting apparatus of the large intestine, may probably render the mucous membrane lining this gut susceptible of inflammation. The same circumstance may, in some measure, account for the very intimate sympathy which exists between the functions of the skin and of this particular intestine, which is very remarkable under certain conditions of climate and temperature; as also for the marked limit to which this disease may be said to confine itself under such influences: for as I shall proceed to shew, the inflammation in dysentery, although possessing no peculiarity of character, and notwithstanding that the lining membrane of the small and large intestines is most probably a continued surface, is yet usually so completely confined to the large gut, that excepting from the mere extension of inflammatory blush for some

two or three feet in extent up the smaller bowels, the lining of the Ilium does not seem to participate in the disease. In several hundred cases which I have carefully examined after death, I have in no instance met with an extension of the ulcerative process above the Ilio-colic valve, in true acute Idiopathic Dysentery; even under circumstances where the mucous membrane of the cæcum, and greater part of the length of the colon has been studded with ulceration, or denuded by sloughing.

In making this statement, I am aware that I do so in opposition to the advanced opinions of several authorities; but without intending to dispute the accuracy of their observations in cases that may have fallen under their inspection, I may be allowed to state what I myself have noted during a course of rather uncommon opportunity. I also am disposed to think, that the method which I pursued in making my post mortem examinations, afforded a better exposition of the parts involved in the disease, than the more

common way of laying open portions of the gut in situ only, and thus obtaining a very partial view of the extensive surface of the alimentary canal.

During about eleven years that I was attached to the European General Hospital of Calcutta, through which long period I had under my immediate charge and treatment, one half of the Medical and Surgical cases admitted into that institution ; it necessarily happened, that a very large number of dysenteric patients, labouring under every shade of the disease, fell to my care. And as dysentery is by far the most fatal disease to which the European (and indeed the native also) is subject in Bengal, my opportunity of examining the ravages caused by this malady were extensive ; and I may say without exaggeration, that I minutely examined almost every fatal case that occurred in the wards under my charge, amounting in the aggregate to some hundreds ; having directed my attention particularly to the subject

from my first connexion with the General Hospital.

Being in my earlier examinations struck with the incorrectness of many of the descriptions which I had read, of the morbid conditions of the parts involved in dysentery ; and the frequent and apparently erroneous connection of this disease with Hepatic and Mesenteric affections ; and also with the fanciful belief in the existence of Spasmodic contraction of the colon, and consequent retention of hardened and irritating fœces as the cause of dysentery, etc. etc., I determined on instituting a particular course of dissections, with a view of satisfying myself as to the correctness or otherwise of such general statements, emanating as they did from received authorities, who nevertheless, appeared to have had but slender opportunities, of pursuing the pathology of tropical dysentery to advantage.

My object was, in every case to examine the

whole length of the alimentary canal minutely, and the method I pursued for this purpose was, after carefully examining the superficial surface of the contents of the abdomen in situ, to remove the whole length of the intestines, from the œsophagus to the rectum, from the body; and the mesentery being divided, the intestines were trailed up and down a long table, and laid open through their whole tract. In this way the inner surface of the canal with its entire contents were exposed to view. The condition of the mucous membrane was now ascertained, by pouring water from a small mouthed jug, over the inner surface of the outspread gut, tracing the several parts of the intestine as I passed on, and then a more minute exposition of the villous coat in a somewhat magnified view was obtained; the changes it had undergone, and the character and extent of the ulceration or sloughing were more fully exhibited, by passing the whole length of intestine through a large shallow pan of clear water, which floating the ragged fragments of the membrane,

distinctly showed the extent and shape of the abraded or ulcerated patches, the hypertrophied condition of the papillæ of the villous coat, or other changes which had been effected from its natural condition, either in structure, colour, or consistence.

It will of course be understood, that I confine my present remarks strictly to Idiopathic dysentery, as it exists as a disease sufficiently formidable and distinct in tropical climates (more particularly perhaps in situations where the soil is alluvial, as that of Bengal,) to entitle it to a separate niche in the table of diseases. I need scarcely explain, that I do not include under the title "Dysentery" all those complicated states of disease of the alimentary canal, which we daily witness as accompaniments of fever, affections of the liver, or spleen, etc. etc. These complicated morbid conditions differ in all respects from that state of disease which we should characterize for practical perspicuity by the simple name of dysentery, and re-

quire treatment widely differing from that usually pursued for the cure of that well recognized disease, which may fairly be considered as the scourge of Bengal—"Idiopathic Dysentery." As unscientific and incorrect would it be to include under the nosological head "Diarrhoea," the alimentary drainings which the exhausted frame undergoes in Pthisis, and in the last stages of many fatal diseases, as to apply the name dysentery to, or to follow a line of treatment applicable to that particular disease, under circumstances where ulceration of the mucous membrane of the intestines may be as much a result of, and dependent on, some other primary disease, as the consequent phenomena I have alluded to in Pthisis, etc. or as aphthous ulcers of the fauces, may be the effect of impaired digestive functions. That ulcers are frequently found to exist in the small intestines in protracted fevers, and that ulceration of the mucous membrane of the colon, and small intestines also, is a common accompaniment of abscess, or of chronic disease of the liver or spleen, I have had

experience enough to know ; as also that ulceration of the lining membrane of the ilium is common, where the mucous coat of that gut, and probably of the stomach and whole course of the small and large intestines collectively, may be the seat of inflammatory disease. But, I am also quite satisfied that dysentery as it occurs under the ordinary interpretation of the term in Bengal, and affections of the liver, are in no way whatever connected with, or dependent on each other ; and that whereas hepatitis is comparatively a rare complaint in the lower provinces of this division of India, dysentery is the most frequent and most fatal disease of Bengal, under all its forms ; that in the great majority of cases where it presents itself as an idiopathic acute disease, its site will be found to be strictly confined to the large intestines, and that the small intestines, mesentery, mesenteric glands, and other neighbouring parts, participate in the diseased action, no further, than from extension of the inflammatory action from the proper seat of the disease ; the small intestine being rarely

if ever, found ulcerated, excepting in very protracted, or complicated cases.

In addition to the peculiar functions of the colon, and its decided susceptibility in this part of India, to take on inflammatory action, as before alluded to ; it is necessary to take into consideration the structure, and the course of this intestine. The peculiar formation of the cæcum, the abrupt angular turns which this gut makes at the right and left hypochondriac regions, and the tortuosity of its sigmoid flexure ; because it is at these particular situations, probably from the mechanical obstruction to the equally free circulation enjoyed by other parts of this bowel, and a consequent greater degree of congestion at these parts under inflammation, that we observe the most extensive ravages of the disease. It is at these situations that tenderness is most apparent on external pressure, and I do not think that there can be a doubt, but that a great number of the instances of pain and tenderness of the right side, common

accompaniments of derangement of the chylopoetic viscera, and too frequently treated as "*Liver*"; are in reality irritation at the right curve of the colon, giving rise to that tender sensation which is experienced on pressure beneath the angle formed by the cartilages of the tenth and eleventh ribs (false); which tender spot is coverable by the points of two or three fingers pressed deeply backward under the ribs; and which pain is commonly said to be owing to inflammation of the "left lobe of the liver," particularly if it is attended by sympathetic pains at the shoulder and in the right side of the thorax, which is usually the case. I do not hazard this opinion without grounds for its correctness, not only drawn from cases which under such a supposition have been successfully treated, but from having seen more than one instance in which the patient had been most unnecessarily reduced to a state of exhaustion, by depletion, mercury, blisters, etc. etc. for the relief of supposed inflammation of the liver; and in whom on inspection after death the

liver exhibited no signs of having been diseased, whilst the existence of sub-acute inflammation of the mucous membrane was conspicuous at the right curve of the colon, where passing below, and in connexion with the liver.

Cases have frequently been reported, in which it has been asserted that portions of the intestinal canal have sloughed and been voided per anum, and my colleague at the General Hospital, the late Mr. Twining, states in his work, that during eight years' residence in India, he had five instances of intus-susception of the ilium into the colon, in consequence of the entire destruction of the ilio-colic valve by ulceration in dysentery, which invaginated portion of the small intestine was separated by sloughing, and was passed off entire in an inverted state; but that he never knew the large intestine to be so voided. I saw most of these cases, as well as three similar ones that occurred in my own practice, and after careful examination of the latter, I came to a decided

conclusion that the voided matter was not intestine at all, but an unorganized calibre of fibrin which had been deposited on the inner surface of the colon. I was the more confirmed in this impression, on examining a case in which on laying open this gut, it was observed to be interlined from the cæcum to the first bend of the transverse portion of the colon, with a cylindrical deposit of fibrin, which on being drawn out, presented a white, smooth, firm, external or intestinal surface, whilst the inner surface was of pink hue, pulpy and villous like; the new formation was thicker than an old English penny piece, very tough, and rather elastic, and a section of it had exactly the appearance of a portion of colon much thickened. Just at the commencement of the turn of the colon, this fibrous matter gradually became softer, and eventually assimilated with the tenacious secretion which was poured out on the surface of the true mucous membrane of the remaining portions of the intestine; in this case the colon was throughout very much thickened,

the mucous coat highly injected, and having a thick, pulpy, and in some places spongy appearance ; but ulceration had not taken place at any portion of the canal, as far as I could ascertain.

It has not fallen to me in my post mortem examinations of dysenteric subjects, to have met with one instance in which the ilio-colic valve had been so "completely destroyed by ulceration, as to admit of the lower part of the ilium passing into the colon," and from this circumstance, and the positive proof of a fibrous cylinder exactly resembling intestine, being occasionally found lining certain portions of the alimentary canal, I should be much disposed to believe, that in a great proportion of the instances in which portions of the entire intestine have been said to have been voided by stool, and the patient recovered without any other very extraordinary circumstances attending the case, a minute examination would have proved, the evacuated tube to be a

mere adventitious membrane, somewhat similar to that met with in the trachœa in violent cases of croup.

Cicatrices of old ulcers are also said to be frequently observed in the intestines of persons who have formerly suffered from dysentery. I have never myself met with any such appearances of a confirmatory character, although I have occasionally seen some marks, bearing a faint resemblance to the scar, which a small circumscribed ulcer may be supposed to have left after healing. There is probably no reason why ulcers of this description, generally the result of sub-acute inflammation, may not heal on subsidence of their exciting cause, in the intestines, as well as in the fauces ; but I should much doubt that extensive ulcerative destruction of the mucous membrane of the colon ever terminated otherwise than fatally ;
+ and Mr. Twining's idea, that sulphur given by the mouth may produce a healing action by coming in direct contact with the ulcerated surfaces of

+ will. July 141

an intestine in dysentery, appears too extravagant to receive confidence.

In the more acute form of dysentery, in which the integrity of the mucous surface is destroyed by ulceration, of an undefined and irregularly spreading character, frequently occupying a large surface of the mucous membrane, and occurring simultaneously at several parts of the large intestines. 'I look upon it the disease invariably proves fatal, and that very few of those cases recover in which the inflammation has passed on to an ulcerative or disorganizing termination, even to a limited extent, in any portion of the large intestines, excepting perhaps at the rectum. Our efforts in the treatment of dysentery should, consequently, be solely directed to a speedy suppression of inflammation, before any morbid change of structure shall have taken place, and on our success in attaining this grand object, will depend the life of the sufferer.

In order to establish a somewhat useful distinction of the degrees of intensity, and the character of inflammation which may have prevailed previous to death, it will be necessary to detail the morbid appearances which commonly present themselves in post mortem inspections in the several conditions under which we meet with the disease, coupled with the symptoms which accompany these several morbid changes, for on such criteria, an applicable method of treatment can alone be instituted, to combat the respective stages of this malady.

I shall therefore endeavour to describe in rotation, the appearances which I have observed after death in these several modifications of dysentery, commencing with the most severe and fatal forms of the disease.

The principal object of this essay, is the more decidedly to establish, on the evidence of extensive observation, the true seat and nature of that

disease, commonly denominated "Dysentery," as it occurs in tropical climates ; in as far as the appearances of the parts seemingly involved in the disease on inspection after death, can satisfy ; as opinion seems by no means settled on the question as yet : some persons still maintaining its dependence on hepatic derangement, whilst others, with as much reason, and by way of avoiding mistake, include the whole contents of the abdomen as participating equally in its production.

To define the different variations of the disease, it will be necessary to explain the leading symptoms which attend them ; and I shall also, without entering very minutely into treatment, or canvassing with critical precision the value of the different remedies which have been suggested for the cure of the disease, point out, in a general way, the means by which I believe it is most efficiently controuled ; and the principles of practice which I have found most successful in, and

consider most appropriate to, the different forms which this disease assumes.

The causes of dysentery, may in a general way be stated to be, any agents which arrest the natural excretions of the body, particularly of the skin, causing internal plethora; an undue determination of blood to the inner surface of the intestines, and consequent inflammation of the susceptible mucous membrane of the colon. From these circumstances we find dysentery most prevalent and most fatal at those seasons of the year when the action of the skin is inordinate, and perspiration is profuse and incessant; and when, at the same time, it is subject to sudden suppression, as in the hot rainy season, incessantly alternating with cold gusts of wind accompanied by heavy falls of rain, and frequent gales, and in the very oppressive humid weather prevalent at the termination of the rains, with chilly nights and mornings, precursors of the cold season; through the whole of which otherwise pleasant

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period, unfortunately, the vicissitudes of temperature by day, and the damp cold foggy nights, are ever favourable to the production of internal congestion, which invariably aggravates all internal organic affections.

Dysentery, under some of its forms, is to be met with, however, at all seasons of the year in Bengal; and we find some constitutions so predisposed to this disease, that any trifling exposure, which in Europe would be productive of a "cold in the head," or a common catarrh, in Bengal gives rise to inflammation of the colon, and indeed, as has been aptly observed, (by Bamfield, if I remember rightly,) the lining membrane of the large intestine seems to bear the same affinity to the skin in India, as the lining tissues of the fauces and air passages do in England. It cannot be denied but that irritating ingesta do sometimes produce dysentery in all countries, but by far the most frequent cause in Bengal, is sudden atmos-

pheric change, acting upon a system rendered open to its evil influence by the circumstances I have alluded to; not unfrequently exasperated by the enervating effects of intoxication and reckless exposure.

With these preliminary remarks, I will now proceed to record the several conditions, under which, for practical purposes, it may be convenient to consider the complaint, and with reference to the distinct morbid changes which are observed to take place in the several stages of the disease, and the peculiar symptoms which attend these respective diseased actions, I shall divide the subject into four Sections. First, the Hæmorrhagic Stage. Secondly, the Acute Inflammatory Stage. Thirdly, the Sub-acute, or Irritative Stage. And, Fourthly, the Chronic Stage.

THE HÆMORRHAGIC STAGE.

SECTION I. That awful state of the disease which so frequently presents itself to the Hospital Practitioner in Bengal, in the persons of sailors, soldiers, invalids, and their wives ; who have been exposed in their wet clothes to the inclemency of the weather, and sudden atmospheric changes, in storms, or wrecked on the river, or at the Sand-heads, and more frequently in persons of the same class who have been exposed to night exhalations,

lying on the wet ground, or on the decks of boats, or ships, in a state of intoxication ; a circumstance too often witnessed even amongst the young recruits newly arrived in the country, (and well charged with the elements of inflammation) many of whom, on each importation, may be seen frequently, early of a morning, lying drunk on the wet grass on the Esplanade, or on the banks of the river, or in the gutters and streets of the bazars, where they have apparently passed the night, their clothes saturated, and besmeared with filth. Under these circumstances the attack comes on with a suddenness and violence which frequently occasions disorganization of the colon, before the patient is brought to the notice of the medical officer ; or even where sloughing of the intestine may not at that time have commenced ; the symptoms are of such an excessive character, as to admit of the disease, with a view to its treatment, being considered in no other light than as *Hæmorrhage* from the mucous lining of the colon, for in these cases the common treatment for dysentery

would be of no avail whatever. The greater number of these cases prove fatal in a few hours, or in three or four days at furthest, and in all instances where the sloughing process has actually commenced, death is inevitable. I have however seen several patients recover from this distressing condition, under a course of treatment adapted to the suppression of hæmorrhage from the inner surface of the large gut; and I think, therefore, it may be fairly inferred, that under a high state of vascularity of the mucous tissue, and congestion of the mesenteric vessels, an outpouring of blood may take place from the surface of the mucous membrane, without any breach of continuity of that membrane, as sometimes takes place from the stomach; and upon the hope and chance of the existence of such comparatively favourable circumstances, a course of practice may be pursued, which I have found occasionally successful, when no other appeared at all likely to be so.

The symptoms usually prevailing at the time these patients are brought to Hospital, are great prostration of strength, wet, clammy skin, generally a very foul tongue as if rubbed over with pipe clay, the coating being thick, but easily scraped off; pulse generally frequent, small, and easily compressible, a foetid odour from the body; much restlessness, incessant purging of a chocolate coloured fluid, like the grumous blood to be squeezed from an incised spleen, or of fluid deeply tinged with, and in great part composed of, blood, with shreds of membrane in a sloughed state; in either case the dejections being most offensive, giving rise to a large collection of flies. The purging soon becomes involuntary, and runs from the patient sometimes through the bedding in such quantity as to form a pool on the ground, or require a pan to be placed under the cot for its reception; the stomach is irritable, the belly becomes much distended and tympanitic, the urine is occasionally retained; rapid pulse, hiccup, great anxiety, and jactitation supervene, and the

patient usually sinks in from twenty-four to thirty-six hours from the time of admission into the Institution, or probably five or six days from the commencement of the attack.

The few cases that I have seen recover from such a state, have progressed rapidly as soon as the hæmorrhage has been completely checked, and in these successful instances membranous shreds were not observed in the evacuated matter.

AUTOPSY.—The body presents no appearance of emaciation, the belly is much distended. On laying open the abdomen, the omentum is found puckered up irregularly, has an unnatural pinkish and sometimes livid hue, the intestines, generally, are distended, but the most prominently so is the colon, particularly at its head, and transverse portions. The appearance of this gut through the peritoneal coat is often mottled, and on raising the transverse arch, dark patches are observable, and not unfrequently just at the first

bend and at one or two parts of the transverse arch, the peritoneal coat is ulcerated through.

The small intestines have an unnatural opacity, with here and there a patch of redness, but seldom any adhesions. The mesenteric vessels are fully congested, the mesentery, like the omentum, is altered in colour, and the glands are pulpy and swollen.

On laying open the intestines through their whole length, the colon is found to be enormously thickened through its course, by a deposit of coagulable lymph between its parietes, but is more particularly hypertrophized at the cæcum, at the bend of ascending, and through the transverse arch, and again at the sigmoid flexure and rectum, at which situations, particularly at the caput coli, it is often from half to three-fourths of an inch thick. In consequence of the transverse bands of the colon the thickening is not regular, but formed into lumpy masses

having a convex surface projecting internally, and leaving intervening sulci. When the contents are of the grumous nature, a considerable quantity may be found in the gut, and adhering to the surface; but when bloody fluid, the quantity is smaller, and the surface of the intestine looks as if it had been macerated; no natural secretions or fœces are met with. The mucous coat, where preserving its integrity, which is principally in the spaces or sulci between the elevated masses, is much thickened, and pulpy, in a state of high vascularity, with purple coloured patches; whilst over the elevated portions it is extensively abraded by irregular sloughing ulceration, which not only destroys the mucous coat and exposes the muscular tissue, but in some places occasionally penetrates through the peritoneal covering, forming one or more ragged holes, seldom larger than a sixpence or shilling, through which some of the contents of the gut exudes. In some instances the mucous membrane is so generally ulcerated and separated from the subjacent tissue,

that on placing it in water, the inner surface of the colon presents an expanse of floating shreds; in other cases the head of the intestine, the first turn, and transverse arch, the sigmoid flexure, and rectum, are the parts most extensively ulcerated, whilst the ascending, and descending portions of the gut suffer least.*

Wonderful as the occurrence appears to be, it is a fact of which any one having opportunity of witnessing these cases, (and they are frequent enough) may satisfy himself, that the line of junction between the large and small intestines is a barrier to the frightful and ravaging state of ulceration and sloughing which is proceeding in the colon, up to the ilio-colic valve; and that the diseased action is confined

* Twining states, that this extreme Hæmorrhagic condition of the disease arises from "circular ulcers with thick abrupt edges;" but defined circular ulceration, which is a methodical process of inflammation, is incompatible with the violent and sudden inflammatory action which constitutes this state of the disease.

to the large bowels, for further than from the mere extension of inflammatory blush up the course of the ilium, for one or two feet in length, gradually fading as it ascends, we find the small intestines free from participation in the malady. The mesentery, the mesenteric glands, and other adjacent parts being also only so far included in the affection as their vicinity to the directly affected structures involves them, and in these desperate cases in which ulceration has destroyed the lining membrane of the cæcum, I have never seen it proceed beyond the limits of the large bowels; a sufficiently decided proof, I conceive, of the strictly local situation of idiopathic dysentery; for any ulcerative spots found at the extremity of the small intestines, or even supuration of the mesenteric glands in protracted cases, may fairly be attributed to continued sympathetic irritation; provided the inflammation causing such sympathetic effect is confined to the immediate locality of the substantive disease.

General Treatment.—It must be obvious that in such a condition as that stated in the foregoing description, the ordinary treatment for dysentery would be of no advantage, and that our efforts must be directed to restraining hæmorrhage from an extensive surface, and proceeding on a hope that the integrity of the mucous coat may not yet have been destroyed, or its texture disorganized, we may thus sometimes save a patient.—It is not an uncommon practice to administer injections of lead, opium, and other sedatives, or astringents in small quantity of one or two ounces, under an impression that they will be absorbed into the circulation, and in that way act on the system; but in the state which I have just described, it stands to reason that the absorbent powers of the affected parts are obliterated, or at least suspended, and that no good could accrue from the use of such remedies thus applied. The object here, must be to occasion contraction of the mouths of the bleeding vessels by the direct application of styptics, at the same time that

we give astringents by the mouth, and support, and tranquillize the system.

By experiment I ascertained, that in a dead body placed horizontally on a cot or table, one pint and half of water, (coloured with indigo) and smartly pumped up the intestines with a Reade's or other patent enema pump, was sufficient to suffuse the whole surface of the colon. And the practice which I followed, with occasional success, I will now relate. The patient being placed flat on a cot, an injection of a pint and half of very cold water in which from half to one drachm of the superacetate of lead, or of alum was dissolved, was pumped up the rectum (with as much force as could prudently be used) every two or three hours, as the urgency of symptoms demanded; and from three to five grains of the superacetate of lead, or from ten to fifteen grains of alum with from half to two grains of opium, were given by the mouth every two or three hours, sometimes combined with five grains

of calomel; an ounce of camphor mixture with from three to five grains of carbonate of ammonia, occasionally, when faint; and a little warm sago and wine from time to time to support the rapidly exhausting strength. In cases where the patient's state was not so far advanced, and indications of extreme debility where not present; general and local bleeding, calomel, opium, and lead, by the mouth, and the cold lead or alum injections where found useful in restraining the bloody discharge; and these remedies were persisted in until all traces of blood in the evacuations disappeared, and the patient rallied.

The great proportion of these cases prove fatal, as before mentioned; but in those that survived the more acute stage, the subsequent treatment consisted mainly in observing abstinence, and being very cautious in adhering for a time to farinaceous diet. Tonics, mild alteratives, and an occasional unirritating aperient, completed the cure.

It is gratifying to find one's earlier impressions confirmed by subsequent experience, and on referring to some monthly reports of the cases in the General Hospital, which I contributed to the "India Journal of Medical Science" so long ago as 1834, I find the following remarks, and cases, which I will transcribe verbatim from the Journal, only abridging the monotonous diaries, and confining my detail to such points as bear particularly on the preceding general remarks, and tend to strengthen my arguments.

Speaking of the admissions into Hospital during August, 1834, I wrote—

"The cases of dysentery have been numerous, and many of them of the most severe description; in two instances, constituting what may be more appropriately termed, *hæmorrhage* from the whole surface of the mucous membrane of the colon: this frightful state of disease not unfrequently presents itself in sailors, who have been drinking very freely

for a long time, the inferior description of liquor procurable at their places of resort, careless of dysenteric symptoms under which they have suffered often for weeks. In such instances the usual treatment for dysentery would be of no avail, and unless the bleeding be speedily checked, the patient must die. Restoration from such a state can only be hoped for where no *destruction* of the lining membrane of the intestine has actually taken place; in most cases, unfortunately, it is found to have sloughed throughout the whole extent of the large gut, and presents a convincing example of the strictly *local seat* of dysentery; the mucous and other coats of the colon having undergone the most horrible ravages, from the rectum to the cæcum; where the ulcerative process usually ceases, and a mere blush of inflammation extends itself for a short way up the ilium, gradually fading as it ascends.

Independent of its administration by the stomach, the use of the superacetate of lead in the

form of injections, is not an uncommon practice in dysentery, but I have always seen them prescribed in small quantity, thrown into the *rectum*, with the intention of producing effects more through the system, than as a local application; but taking into consideration, the condition of the parts when labouring under such a state of disease as I now allude to, it must appear evident, that the absorbent powers of the involved structures are suspended, and that it would be extravagant to anticipate any advantage from the use of the remedy with such an object. Whilst however I should place no confidence in the virtues of the superacetate of lead thus employed, I feel satisfied that I have witnessed decided benefit from the *local application* of cold injection of the superacetate of lead and opium, in such quantities as to wash over the *whole inner surface of the colon*, and thus act as a local astringent; and in cases of hæmorrhage from the colon, in conjunction with medicines administered by the mouth, I usually

prescribe an enema every three or four hours, composed of from half to one drachm of the superacetate of lead, and two or three grains of opium dissolved in a pint or a pint and half of cold water, or congee water, to be pumped with some force up the colon, the body being in the horizontal position, until the bloody or bloody fluid stools cease to be voided. I have seen several instances in which the practice has been successful, where I believe the patient would have died had the lead injections not been used. In cases which have terminated favourably, I conceive the bleeding could only have been an *exudation* from the surface of the mucous coat without breach of continuity, for in all instances where the sloughing or ulcerative process has taken place, I conclude the patient is certain to die. As however we can never form a correct estimate of the extent to which the disease has proceeded, it appears to me advisable to act on the probability of the parts being in a condition favourable to the application of the experiment,

which under any circumstances will not be attended with injurious results."

Case of Dysentery, (abridged), 3rd of August.
G L., a sailor æt. about 36, who had for five or six months been strolling about the Calcutta Bazaars, drinking largely of country spirits, and had for several weeks had "purging on him," was admitted the General Hospital on the preceding evening; during the past night he had voided as many as twenty stools of fluid blood, with floating particles of white matter; the belly was distended and tender, and he experienced occasional internal spasmodic pain; the tongue had a thick yellow mucous coating, the pulse was frequent, and moderately full, skin wet, the countenance cadaverous, and he was feeling very faint and weak.

R. Calomel : gr. vj.

Opii gr. ss. every four hours.

R. Plumb : sup : acet. : ʒss.

Opīi gr. ij.

Cold conjee water, lb. iss—as an enema
three times a day.—Diet, arrow-root,
and wine.

4th. Frequent stools of bloody fluid, with large
clots of dark bloody mucus, and white shreds;
pulse frequent, stomach irritable, patient very low.

Contr. calomel : ʒ opio et adde plumb sup. :
acet. : gr. v.

Lead cold injections, lb. iss.

Apply a Blister over the abdomen.

6th. The stools equally frequent, but con-
taining very little blood; being now, *brown fluid*,
with dark clots of mucus.

Contr. Remed. :

7th. Had more than twenty stools of nearly pure
fluid blood, during the night, continues to vomit
now and then; pulse quick, countenance very un-
favourable.

Cont.: med.: injections, wine and sago, etc.
etc.—Died on the evening of this day.

Post mortem examination. On the abdomen being laid open, the colon was observed to be distended, and had a dark mottled appearance through its peritoneal covering. On cutting open this intestine, it was found to be much and irregularly thickened, from deposition of fibrin between its tissues, and to exhibit a rough lumpy surface internally. The mucous coat, from the anus to the cæcum, was abraded by sloughing, and presented a series of extensive ragged ulcerations, alternately of black and yellow colour, and thus having a spotted appearance. When floated in water, the mucous coat was observed hanging in shreds at the edges of the ulcers or sloughs; in fact, the whole internal structure of the gut, now presented a ragged flocculent surface. The process of ulceration, abruptly terminated at the caput coli; the mucous lining of the ilium from this point was inflamed, and the

redness proceeded up the small gut, *gradually fading* as it ascended, for about two feet distance, where it was no longer detectable, and the lining membrane assumed a natural appearance.

Case 2nd. J. H., a sailor, unattached to a ship for some months, and during that period living in the Calcutta Bazaars, stated on his admission on the evening of the 1st of August, that he had been suffering from constant purging of bloody slime, with much straining, for a week; he had taken some purgative medicine; his belly was full, and tender in the course of the colon, particularly at the transverse portion; pulse very quick, and tongue foul.

V. S. ad deliq. :

R. Calomel : gr. x.

Ipecac : gr. iv.—Mor : Som :

Low diet.

2nd. August A. M. During the night has had from forty to fifty copious bloody fluid stools,

which pass off unconsciously at times ; the belly tense and tender ; skin warm and dry, pulse 120.

V. S.—Rept. : and twelve leeches over the right iliac region.

Cold injection of lead and opium every four hours.

R. Calomel : gr. x.

Ipecac : p. gr. iv.

Opii gr. ss. every four hours,——flannel dress and patee.

A. M. Only two stools during the day, similar to those at night.

Contr. : Remed. :

3rd. A. M. Frequent evacuations of nearly pure blood during last night ; pulse rapid, and small ; he feels weak, and is despondent.

Calomel : gr. vj.

Ipecac : gr. ij.

Opii gr. ss. every three hours. Cold lead injection, every four hours.

Diet, warm sago.

P. M. Only four stools to day of brown fluid, having very small proportion of blood. The man feels better, and his pulse is slower.

Remedies continued regularly. —

4th. A. M. His extremities are very cold, and the skin wet, and clammy, pulse rapid, fourteen stools, of brown fluid tinged with blood, in the night.

Contr. : Remed :

P. M. Twelve stools in the day containing less blood.

Contr. : med. : and injections, every four hours.

5th. A. M. Pulse firmer, and slower ; twenty stools in the night, of fluid more deeply tinged with blood than that of yesterday.

Med. : and injections contd. :

P. M. Stooling frequent, and very bloody : pulse 120, soft, and full.

℞ Calomel : gr. vj.
Plumb. : superacet. gr. v.
Opil gr. j. every three hours.
Injections continued.

6th. A. M. Eighteen stools in the night, of brown fluid, having very slight admixture of blood ; feels more comfortable, and the pulse not so rapid.

Remedies continued.

P. M. Twelve fluid evacuations, in which I can distinguish no traces of blood ; gums slightly affected by mercury.

Contr. : Remed. :

7th. A. M. Nine brown stools in the night, without blood ; pulse 100.

℞ Pil : Hydrarg :
Plumb : sup. : acet. : āā gr. v.
Opil. gr. j. every three hours.
Injections contd. :

p. m. Four stools in the day of pale brown fluid.

Contr. : Remed. :

8th. A. M. Four stools in night, free from blood, ptyalism copious.

Plumb. : sup. : acet. : gr. v.

Opil gr. j.

Ter in die.

Contd. cold lead injections.

9th. Slept well, passed four brown fluid stools, free from abdominal pain ; pulse 100.

Contr. : Remed. :

p. m. Four stools in the day.

11th. Skin moist, pulse soft, though frequent ; six stools in twenty-four hours, devoid of blood.

Lead injections and medicine omitted.

R Pul. : Ipecac : gr. ij.

Pil : Hydrarg : gr. iij.

Ext. : cinchonæ. gr. iv.—ter die. Four

leeches over the right iliac region, in consequence of tenderness.

12th. Only two stools of thin fæcal matter; the right iliac region still tender.

Rept. : Hirud. : iv.

Cont. : med. :

From this period counter-irritation was established over the tender part of the colon, by emetic tartar, and his bowels were regulated by mild aperients.

N. B. The foregoing was a somewhat complicated case, and one taking a middle course between the common acute form of the disease, and the *Hæmorrhagic condition*; exhaustion, not being so prominent a feature in the early stage, as high inflammatory action, and congestion.

Case 3d. Mrs. M., a soldier's wife, who had been exposed to cold and wet for several days and nights, in consequence of the native boat in which

she had embarked to proceed to the upper provinces, having been swamped in a gale of wind; was brought to Hospital in a deplorable condition from incessant purging; the evacuations were bloody fluid, and ran off involuntarily; her pulse was quick and feeble, skin wet and cool, and she was much exhausted.

R Calomel: gr. v.

Plumb. : superacet. : gr. iij.

Opii, gr. ss. every three hours.

Cold lead injections lb. iss. every four hours.

Mistur: camphor: Comp. : ʒj—occasionally, if faint.

Warm sago and wine, now and then.

This treatment was persisted in during three days, with gradual amendment; on the fourth day the stools were quite free from blood; her mouth was at this time slightly affected by mercury.

The previously prescribed medicines and injections were now omitted, and Dover's Powder,

Hyd: ċ. Cretâ, and Kino, taken for another week; when her bowels became rather indolent, and an occasional mild aperient was necessary: the patient perfectly recovered.”

“As the foregoing cases sufficiently exhibit the principle of treatment which I have advocated, in my remarks on the violent and extreme form of dysentery which I have treated of in the preceding pages; I prefer repeating them here, to introducing new ones even more nicely assimilating to the practice I have suggested, and now usually follow; because they are unsophisticated *clinical reports* from the Public Hospital Diary, and the post mortem description was penned at the dissection, without any other object, than a faithful detail of morbid appearances.

THE ACUTE INFLAMMATORY STAGE.

SECTION II. *Symptoms.*—We are usually obliged to trust to the patient's memory, for a description of the very earliest symptoms of the disease, which by the most intelligent observers, are said to be, an unpleasant sensation in the bowels, followed by several evacuations of consistent fœces becoming gradually thinner; these again by frequent fluid stools, accompanied by griping; after from twelve to twenty-four hours,

the stools become very scanty, and are tinged with blood; and these are followed by very frequent purgings of mucous and blood, or as the ordinary class of patients term it "bloody slime," or a bloody fluid, with shreds, and clots of mucous; the evacuations being much more numerous during the night, and towards early morning, than in the day. Excruciating tormina precede and accompany each evacuation, and during expulsion, the patient suffers agonies from tenesmus, and great desire to continue to strain, the rectum being often prolapsed in this effort, and requiring considerable pressure for its return. The abdomen is at first distended, and generally tender, but on pressure being applied with the hand, the more acute tenderness will seem to exist at the right iliac region, and in the course of the transverse arch of the colon.

The tongue is most frequently moist, and of tolerably natural appearance; occasionally it is very red, like beet root, and as if the skin had

been peeled off its edges and tip; at other times, it is white, and dry. The latter conditions existing more usually in the hot season, when dysentery is frequently accompanied by pyrexia, and is of comparatively mild description. But in the more severe forms of the disease, which occur in the rainy, and cold seasons, the most remarkable circumstance is, the entire absence of general symptoms, commensurate with, and indicative of the local disease.

The pulse is usually natural in force and frequency, seldom beating above eighty, or eighty-six in a minute; the skin moderately cool, and very moist; the hands being often cold, and clammy, and the tips of the fingers blue. So faint indeed are the constitutional guides, that the practitioner will have to depend in forming his diagnosis of the existing intensity of the disease, almost entirely on two indications, viz. the character of the evacuated matter, and the degree of acuteness of pain and tenderness, evinced on pressure over the line

of the colon, particularly at the cæcum, and the transverse arch; for as in inflammation of mucous tissues generally, bloody, and bloody muco-purulent exudations, indicate a high state of inflammatory action; so in dysentery, will excretions of these descriptions, and the gradual deviations from such, towards those of more natural consistence, dictate the character, extent, and progress of the disease; and thereby point out the treatment, applicable to the several gradations of the complaint.

Should the disease not be subdued before disorganization of the mucous lining of the colon has been effected; whether with, or without destruction of surface; the constitutional symptoms will assume a typhoid character; and where ulceration has taken place, in addition to bloody slimy, or bloody fluid, evacuations, there will be voided shreds of mucous membrane, and large clots of dark coloured, coagulated mucus. Sometimes, though rarely, portions of fibrin, of many inches in

length, exactly resembling intestine in a sloughing state, will be expelled. Constitutional symptoms will now become more indicative of the serious local mischief; the pulse will be small, and rapid, and eventually intermittent. The tongue will be brown, dry, and hard; the bladder may be either irritable, or the urine retained. There will be loathing of food, great exhaustion of strength, and emaciation; distressing expression of countenance, restlessness, anxiety, and consciousness of approaching death; followed by incessant involuntary stools, offensive smell of the body, muttering delirium, sub-sultus, etc. etc.

Death often takes place in from ten to fifteen days, but frequently, not until the third or fourth week from the invasion of the disease.

AUTOPSY.—The subject is usually considerably emaciated, but the belly is commonly distended. On laying open the abdomen, the omentum has a thickened, and sodden appearance, is of pinkish

hue, with here and there patches of dark discolouration—flakes of coagulable lymph, of yellow colour, and forming a thin expansion, are often attached to its margin, or lying beneath it, on the surface of the intestines, and connecting it, or certain convolutions of the intestines, together, by soft adhesion. The mesentery is also thickened, and red, the glands often enlarged, and the mesenteric vessels turgid. The small intestines, are unnaturally opaque, and their peritoneal covering has here and there a blush of inflammation; at which portions it is sometimes coated with coagulable lymph.

The colon is more or less distended, and prominent; according to the violence and duration of the disease; the more rapid and severe the attack, the thicker will be the parietes of this intestine, from interstitial deposit of fibrin between, and actual thickening of its coats. On the contrary, in protracted cases, the hypertrophied condition of the canal, will be comparatively

less. Generally at the cæcum, transverse arch, and sigmoid flexure, the intestine will present through its peritoneal coat, a dark mottled appearance, and at the two former situations, the ulcerative process will occasionally be found to have penetrated through the peritoneal membrane, forming an irregular opening externally.

On laying open the alimentary canal, in cases where the disease has been severe, and rapid in its course, the mucous membrane of the large intestines, from the rectum to the cæcum, will be found in a highly inflamed, and congested state; having a thick velvety consistence, and a bright red colour, with here and there patches of livid hue. The surface of the membrane will be covered with bloody mucous secretion, or bloody fluid, and clots of coagulated dark-coloured mucus, and shreds of mucous membrane, will be found in the most dependent parts of the bowels. Sometimes, certain portions of the inner membrane will be found lined with a thick cylinder of coagulable

lymph; this formation being most usually met with at the caput coli, and through the course of the ascending colon. In by far the greater proportion of cases, extensive ulceration will have taken place, and this will be particularly the case at the cæcum, and first few inches of the ascending colon, at the right bend, and through the transverse portion; and again, at the sigmoid flexure; the greater part of the ascending and the descending portions, being less involved.

Where the disease has been rapid and violent, the ulceration will generally be of an undefined sloughing character, but in more tardy cases, the ulcers will be more regular in shape, and have defined margins; presenting a decided contrast to the spreading slough produced by the more violent form of inflammation, prevailing in the Hæmorrhagic Stage, on the parts being immersed in clear water so as to float the ragged shreds of membrane on the surface, and skirting the margins of the ulcerated spaces.

Continuing the inspection into the small intestines, the mucous coat of the ilium will usually be found inflamed at its junction with the colon, and for several inches up its course, but this blush of redness gradually fades away, and is seldom traceable higher than twelve or fourteen inches above the ilio-colic valve, being apparently a mere *extension of redness* from the seat of the disease, and participating no further in it, than its adjacent locality necessarily occasions it to do. The sloughing process in acute cases never ascends above the ilio-colic valve; and excepting in very protracted cases, ulceration is never met with higher up than that line; and even in the few instances of long continued idiopathic dysentery where it does occur, it is of such superficial character, and so immediately at the extremity of the ilium, as clearly to show, that it is merely the effect of irritation occasioned by vicinity to the diseased organ. So rare, however, is ulceration of the lower part of the small intestine, in acute dysentery, that I can scarcely call to,

mind a case in which I have met with it, where the disease had not been of a complicated character, or was not of unusually protracted duration.

Treatment.—It would be an interesting pastime to trace the *fashions* which have prevailed in the practice of medicine from time to time, so widely differing have they been; and yet each system has held its position for a certain epoch, with a pertinacity that set difference of opinion from the “established principles” of the time at defiance. A medical practitioner not following the exact practice of the day, would not only be considered very ignorant, but would in all probability suffer in professional reputation, on the first unsuccessful case he happened to encounter, amongst his patients in the higher class of society. He would at one time be pronounced to have killed his patient by bleeding, and at another it would be said, that his patient had been allowed to die from not having been bled enough, and these con-

flicting conclusions would have been arrived at, under precisely similar circumstances, as regards the disease in question. Strange as this may appear, it is still more strange, that a certain number of patients do die under whatever treatment they may be subjected to; and that the very opposite courses of treatment do not necessarily lead to opposite results; on the contrary, as regards the treatment of fevers particularly, the difference of mortality is not so great as prejudice would lead one a priori to suppose. The only inference that can be drawn from such extraordinary changes as are traced to take place in the minds of equally talented men on the same data, at different periods, so as entirely to occasion the subversion of one system of practice, and the substitution of another of diametrically opposite nature; is the pitiable fact, that each is for its reigning period extravagantly upheld to the exclusion of every other, and at the expense of common sense and the daily lessons of experience, and consequently, each in due time works

its own destruction, in the, at length, dear bought acknowledgment, that methodical extremes in the practice of medicine are injudicious and mischievous.

I have been led to these remarks, by my having some years since had the curiosity to examine some of the old diaries of the General Hospital, which the white ants had not entirely eaten up. These precious public documents had been preserved with such scrupulous care, that they had never seen the light, from the time they had been consigned to the Steward's store-room ; and for the most part presented a mass of the earthy deposit, which that destructive insect leaves, in lieu of the paper it has devoured.

The diaries of the earliest date that I could decypher were for 1797, at which time the principles of practice followed in dysentery, hæpatatis, and fever, were as contrary to those of the present time as it is possible to conceive them to have

been ; yet it may act as a caution, when we may be disposed to criticise the practice of others who do not follow a similar course to our own, to learn that these mouldering records proved, that the per centage of deaths in congestive or remittent fever did not, under a treatment of bark, opium, porter, wine, and brandy, exceed that of the present era of bleeding and starvation. Although we may question very fairly whether subsequent congestive organic diseases were not more frequent sequelæ, and whether subsequent affections of the liver were not more prevalent than they at present are. With respect to "fluxes," as also hæpatitis, which were treated on precisely the same liberal principles as fever, the success was not so great, for I find that in the year 1797, out of thirty-seven cases of acute dysentery, treated in the months of March, April, and May, twenty-one died. Out of fifty-eight cases, treated in the ensuing two months, thirty-five died ; out of twenty-two cases treated in August and September, sixteen died ; and out of twenty-one cases

treated in the two months, November and December, fifteen died.

In 1798—during three months of the hot season, out of seventeen cases, seven died; in the rainy season, out of twenty-seven cases, fourteen died; in the cold season, out of twenty-five cases, only eight died.

During the months July, August, September, and October, 1799, of thirty-one cases, eleven died; and so on in the same proportion for several successive years. Such frightful extent of mortality may doubtless in part be attributed to the inefficient or even baneful treatment pursued for the relief of the disease, at these early periods; because, although dysentery must under any course of practice, continue to be a most fatal disease, in India; yet, when subjected to an antiphlogistic treatment, in which general and local blood-letting form a prominent part, the average number of deaths, even among hospital

patients, does not exceed from ten to fourteen per cent.

Ipecacuanha was in some cases freely administered in doses of three or four grains every three or four hours; generally combined with opium, or in the form of Dover's powder. Calomel with large doses of opium and mercurial frictions to Ptyalism was the most frequent practice: both were preceded by a purgative of jalap, castor-oil, or salts, and an occasional purge was given at intervals through the treatment; but general, and even local blood-letting was seldom practised; blisters over the abdomen were frequently prescribed. A full diet, and large quantities of porter, wine, or spirits were always allowed, and increased in quantity as the stools became more bloody, and other symptoms of inflammatory action, or as they were then considered, of putridity and exhaustion, increased. Post mortem examinations were seldom made, but when they were, the large intestines are stated to

have been studded with ulcerations; the liver, as a matter of course, was either too large, too small, or somehow or other at fault, but no mention is made of positive indications of disease of that organ.

Although I may be considered to be wandering from the immediate object of my paper, it may not be uninteresting to introduce an epitome of a few cases of dysentery, and of fever accompanied by "flux" of dysenteric character, detailed in the old Diaries I have alluded to, although I am aware that similar information may be found in the works of authors of those times.

Case 1st. A female admitted Hospital on July 8th, 1797—labouring under acute dysentery, very frequently bloody slimy stools, with much pain and tenderness of the belly, and irritable stomach, pulse 130.

Treatment.—A brisk purgative, followed by

calomel and opium at intervals of four hours, mercurial frictions, opiate clysters, bark in doses of one drachm; "as often as the stomach will bear it."

Diet. Mutton, and six gills of wine a day.—
Died on the 4th.

Case 2d. A young Recruit admitted May 1st 1797—frequent stooling of mucus and blood, tormina, tenesmus, irritable stomach, dry tongue; the stools subsequently changed to brown fluid tinged with blood; on the fifth day a portion of the "inner coat of the intestines, twelve inches long, came away;"—delirium, etc. etc.

Treatment.—At first a purgative (occasionally repeated through the treatment,) of calomel, jalap and rhubarb, mercurial frictions, anodyne clysters, and at intervals a powder composed of rhubarb, magnesia, and chalk.

Diet. Milk, sago, whey, and eight glasses of wine a day; and on delirium coming on, the

quantity^{*} of wine was increased to sixteen glasses daily.—*Died May 10th.*

Case 3d. “Fever and Dysentery.”—A soldier admitted 12th March, 1797. Had had fever five days, with great pain of belly, griping, and tenesmus, very frequent stools of mucus and blood; skin hot and dry, tongue red and shining, pulse frequent and hard; much thirst.

Treatment.—Calomel and jalap at first; with occasional after purges, of calomel and ext. colocynth; followed by compound jalap, castor-oil, or salts, and emetic tartar; fomentation of belly, and opiate clysters. Calomel gr. iv. \bar{c} . opio. gr. i. every four hours, and mercurial frictions to ptyalism. Blister over the abdomen.

Diet. Milk, a roast fowl, mutton, four gills of wine daily.—*Discharged cured 21st April.*

Case 4th. Fever—A soldier labouring under fever, admitted 28th May 1797. Symptoms prevailing

at the time of admission were, a very hot skin, pulse 104, tongue foul, delirium, etc.

Treatment.—A purgative, one drachm of powder of bark every three hours, a blister over the head.

Diet. Mutton, and twelve glasses of wine daily.—*Died June 3rd.*

The cases occurring in the rainy and cold seasons were treated in the same manner. I have selected the foregoing from the diaries of the hot season, to show, that the presence of pyrexia, did not deter from a pursuance of the stimulating practice.

By those who take a pathological view of the subject, the treatment of dysentery at the present day is conducted on strictly antiphlogistic principles, and the remedies most depended upon for effecting a cure, are either ipecacuanha, or calomel; each course of medicine being used in conjunction with an equal extent of general and local blood-letting, and a spare, bland diet; both

of which are considered of paramount importance, and are indeed the agents which constitute the principal difference in the practice of the present and the past century; for then, both ipecacuanha and mercury were as freely used as they now are, and the latter even more profusely; but each almost invariably unaccompanied by abstraction of blood, either generally or locally, and with a diet of most inflammatory and stimulating nature.

When attached to the European General Hospital, I was also Surgeon of the Calcutta Native Militia, and had under my charge the Hospital of that corps of twelve hundred men, averaging forty sick daily under treatment, of whom a large proportion were dysenteric subjects. I had consequently a good opportunity of testing the value of these rival methods of treatment, on both the Native and European constitution, and I entered with perfect impartiality on a comparative investigation of their respective merits.

It cannot be supposed to have escaped the observation, of every practising member of the profession, that however valuable in conjunction with other means ; blood-letting alone, cannot be depended on for the entire removal of local inflammation ; and that even though the body may be almost drained of blood, the vessels of the affected part will remain congested to a certain extent ; and that under a mitigated form, the disease will proceed, unless the abstraction of blood be followed up by other auxiliaries.

It is also, I believe, generally understood, that inflammation occupying a mucous membrane, is less controulable by depletion than when seated in a serous tissue ; and that it is frequently necessary for its subdual to produce a diversion of the action of the vessels of the affected part by exciting a contra action in the system inimical to the support of inflammation. If these opinions are true, and applicable at all, they are particularly so in the treatment of dysentery.

Now, from what I have observed to be the therapeutical action of ipecacuanha, I should imagine its effects on the system to be purely that of a depletory, and that it merely assists in subduing inflammation by this power, and its nauseating quality, without producing any other effects; and, consequently, without occasioning any change in the constitution, or in the action of the vessels supplying the diseased part. That it often, under these circumstances, only guides the acute into a sub-acute, or eventually into a chronic form of the complaint, which not uncommonly requires a subsequent mercurial course, or a change of climate for its cure, and too often terminates fatally.

With respect to mercury under a judicious administration, combined as is the general custom with tartar emetic or ipecacuanha, and occasionally with minute quantities of opium, its superior powers as an antiphlogistic are acknowledged, whilst at the same time it has the

peculiar property of exciting that counter influence in the constitution, and of changing the action of the vessels of the part under inflammation, of which ipecacuanha is entirely devoid. I have therefore no hesitation in saying, that for the cure of acute dysentery the ipecacuan treatment is not worthy of that confidence which the mercurial treatment is fully entitled to.

Unquestionably there are states of the constitution, such as the cachectic, scrophulous, scorbutic or consumptive; or occasionally in childhood; in which calomel could not judiciously be had recourse to, but these are exceptions to general practice, which the most superficially informed person will recognize. There are also sub-acute and chronic forms of the disease in which a mercurial course would be quite uncalled for, and in which now-a-days it is seldom advised, excepting in the mildest forms, in conjunction with ipecacuanha.

■ The mercurial treatment, to secure its real advantages in dysentery, is not however to be followed at random, and only with a desire of *producing ptyalism*, as the main object of its administration, for it must ever be borne in mind, that an undue mercurial excitement constitutes a state of constitutional irritation, which is in itself productive of, and favourable to, the spreading of ulceration; and that this appears to be particularly the case, where its use has not been accompanied by a sufficient abstraction of blood. To obtain its salutary effect in dysentery, it must be used as a powerful assistant antiphlogistic agent to general and local bleeding, and its employment should be carried no further, than is sufficient to subdue the inflammatory tendency. The proofs of its having attained this material point, are the cessation of bloody mucous stools, and their change to excretions of more natural character, and the subsidence of acute pain and tenderness in the course of the colon. This step obtained, the calomel treatment may be prudently changed for

the milder forms of the medicine, as blue pill, or Hyd ē cretā with ipecacuanha and hyosciamus, etc. particularly if the gums have become slightly affected. Should this be the case *before* the stools are quite free from bloody or mucous appearances, the same change to the milder treatment should be adopted, immediately on the gums becoming tender, as the slightest indication of the mercury having affected the constitution, is sufficient to indicate, that it has produced all the *good* it will do; and a further continuance is unnecessary, and may be prejudicial.

Of general and local blood-letting, it is only necessary to say, that they are the corner stones in the treatment of dysentery, on the anti-inflammatory practice which I advocate; but at the same time, the abstraction of blood must be made with due consideration of the strength of the patient, and of the severity, and probable duration of the disease.

With reference to purgatives in this disease ; their primary administration for the purpose of correctly exhibiting the contents of the alimentary canal ; and their subsequent objects of unloading the vessels of the inner surface of the intestine, and of obviating a collection of unnatural secretions in the bowels, are most requisite ; but they should be of an unirritating nature, such as castor-oil, jalap with carbonate of magnesia, senna and salts, etc. etc., and not given oftener than every second day. The drastic and resinous purgatives so often prescribed, such as the common compound jalap,* and compound scammony powders ; Ext. of colocynth, etc. etc. should be avoided, as they produce no advantages over the milder laxatives, and excite great irritation of the inflamed intestine, and frequently in their course through the colon occasion violent vomiting. It is scarcely necessary here to repeat, that “scy-

* The presence of the supertartrate of potash in the compound jalap powder, causes that medicine to be an irritating and griping purge in this stage of the disease.

balæ'' and solid fæcal matter are never found in the intestines of persons labouring under acute dysentery of this country.

As an intimate sympathetic action exists between the surface of the body and of the large bowels, (as has been mentioned in the early part of this essay) the maintenance of a free action of the skin will be of the utmost importance in treating dysentery; for this purpose a flannel dress is requisite, and a flannel belly band, or patee, should be worn.*

The warm bath may be sometimes used, but it is too exhausting to be often repeated. Hot fomentations frequently applied to the abdomen

* A flannel patee, or belly band, from absorbing the perspiration at the waist, where the clothes are usually worn tighter than at other situations, and a greater quantity of heat and moisture is generated, is a valuable preventative of abdominal disease, and should always be worn next to the skin, by residents in tropical countries.

afford much relief, and probably assist in soothing, and allaying inflammation.*

Regarding opiates, excepting in the form of enemata, when tenesmus is distressing, or in small quantities of a sixth or the fourth of a grain, combined with calomel and ipecacuanha, or tartar emetic, where there is much intestinal irritation, and no pyrexia, their use is prejudicial; as they retard the natural functions of the secreting organs, and cloak, without relieving, the urgent symptoms of the disease.

Blisters, and counter-irritants of any description, are only useful after the acute symptoms have been subdued, and where, although a certain de-

* The native dressers of India are very expert in fomenting; they cut a thick blanket into pieces of about fourteen inches square, these pieces being immersed in a pan of boiling water which is closed with a loose cover, they are laid hold of by one corner, and drawn out between the compressed edges of the pan and its cover; they are then twisted in a towel until all the fluid is squeezed out, and are laid on the abdomen as hot as the patient can bear, thus causing no wetting of the bed clothes,

gree of inflammation continues, the abstraction of blood cannot prudently be carried further; in such instances, a blister is occasionally serviceable, and such as are not likely to occasion stranguary, should be preferred.

The strict observance of a most bland and farinaceous diet is of imperative importance throughout the treatment, and no other drink than barley water, toast water, linseed, or other mucilaginous beverage, or common tea, should be allowed, and these only in small quantity at a time.

The course of application of these remedies as I adopt them in treating a case of acute dysentery may be summed up in the following general description. There existing no peculiarity of constitution contra indicating the use of mercury; the patient is at first bled, in the erect position, to approaching syncope; has a hot bath, and takes ten grains of calomel with four of ipecacuanha; he is clothed in flannel, and has a flannel

patee applied round the stomach. Six hours from the time of taking the calomel, one ounce of castor oil is administered.

The evacuations produced by the purgative, being a mixture of blood and mucus, or bloody fluid with mucous clots, indicating a high state of inflammation of the mucous membrane of the colon, and other symptoms of the disease continuing; after about ten or twelve hours from the first bleeding a second venesection, to the extent of from twelve to twenty ounces is performed, and from twelve to sixteen leeches are applied round the verge of the anus, and as many more over the right iliac region, or other most tender part of the abdomen. Five or six grains of calomel, with three of ipecacuanha, or a sixth of a grain of Tartar emetic are administered every four hours, sometimes combined with a sixth or a quarter of a grain of opium; the abdomen is fomented for ten minutes at a time every three hours, and no other diet is

allowed than thin arrow-root, or sago; and as drinks, tepid barley water, congee water, tea, etc. etc.

It is seldom that a third general bleeding is necessary; but leeches to the anus and over the tender parts of the abdomen, and fomentations, will be required to be repeated daily, as long as the acute symptoms of the disease remain. The calomel and ipecacuanha is to be steadily persisted in until the stools are quite devoid of blood, and the pain and tenderness in the course of the colon has abated to a mere *soreness*, or until the gums are becoming tender, thus indicating that the system is under the influence of mercury; in either of these cases the calomel should be immediately discontinued, and small doses of blue pill with ipecacuanha substituted, so as if possible to keep the mercurial action at this moderate standard, until the disease is completely subdued; an unirritating purgative should be given every second day to expel

any collected secretions, and to unload the vessels opening on the surface of the alimentary canal, the same low regimen being adhered to.

Independent of the remedies intended for the cure of the complaint, it will be necessary in the course of a disease of such severity and duration, to have recourse to palliatives for the relief of such unpleasant symptoms as may from time to time arise. Thus, for distressing tenesmus, sitting over the steam of hot water, hot fomentations to the part, an injection into the rectum of a few ounces of very cold water, or an enema of ten or fifteen grains of the super-acetate of lead, with forty or fifty drops of laudanum, in two ounces of water, (it being retained for a time) will each in their turn afford great comfort.

Irritability of the bladder is often relieved by a small quantity of cold water being injected into the rectum, or by the sympathetic effect produced by passing a bougie down to the neck

of the bladder, and withdrawing it again directly ; but as my present object is merely to point out the leading features of practice, I need not enter into all the minutæ of treatment, which each individual case will of itself dictate.

After the acute symptoms have disappeared, the unnaturally excessive secreting action of the mucous membrane, and peristaltic excitement of the intestines which have prevailed during the active stage of the disease, will be followed by a corresponding degree of inertness and loss of tone, which will be indicated by an absence of the natural colour and consistence of the stools, and by more or less constipation ; whilst there will probably remain a soreness on pressure over the cæcum, or transverse portion of the colon, from the continuance of a slight degree of inflammation at these particular situations.

A few leeches from time to time, or counter-irritation with tartar emetic, lunar caustic, or

- a blister, may be requisite to relieve this tenderness. And a course of mild alteratives, tonics, and aperients, will generally be necessary to bring about healthy secretions, and to complete a cure.

Throughout the treatment, there will be no circumstance meriting greater attention than the regulation of diet ; during the acute stage, it should be confined to thin arrow-root, sago, or moss jelly,* which, as the patient recovers, may be very cautiously increased in quantity, or changed for some equally bland and nutritious article of food, and through convalescence should be of the most delicate and digestible consistence ; whilst the beverage must be simple, and without stimuli.

The Ceylon moss (*Fucus Amylaceus*) introduced into use in Calcutta by Mr. Previté, formerly of the firm of Messrs. Gunter and Co. of this city, when made into jelly, constitutes a light and grateful article of diet for dysenteric patients, as well as for convalescents after fever, and other debilitating diseases.

THE SUB-ACUTE, OR IRRITATIVE STAGE.

SECTION III. Under this head I would not be understood to refer to that subsequent state of disease into which the more active form of the affection resolves itself, so much as to that sub-acute condition of the complaint in which, from the first, the local inflammation is of a less violent type. This form of the complaint is of very frequent occurrence, and constitutes a large proportion of the cases which are met with

in persons whose constitutions have been somewhat enervated by residence in a hot climate; such, for instance, as are usually met with in private practice in Calcutta, where the subjects have seldom been exposed to vicissitudes of weather, or deprivations of any sort. It is also (excepting as chronic dysentery) the almost invariable form in which we meet with the disease in the temperate habits of the Natives of Bengal; and although it resembles in many of its indications the acute form, as nearly as a milder condition can resemble a more severe attack of the same disease, yet has some important characteristics worthy of consideration.

As regards the phenomena noticed during life, the most remarkable is, perhaps, the circumstance of the general system being more decidedly affected by the local disease in this, than it is in the more acute form; and the fact, that it is this state of the disease which is found to exist in company with organic affections of other viscera,

and which has no doubt given rise to the erroneous, and practically speaking, dangerous impression, that dysentery is dependent on hæpatitis. A second peculiarity of this stage of dysentery, is the difference in the character of the voided matter per. anum, indicating a less degree of inflammation and irritability of the intestines; and, consequently, admitting of a modification in the activity of the general treatment; and of the administration of more active purgatives if necessary, for unloading the alimentary canal.

In respect to the appearances after death, also, there is a marked difference from those witnessed as the effect of the acute disease; the more distinct, defined, regular, and scirrhous character of the ulceration, and the granulated or honeycomb-like changes to which the mucous membrane of the colon is frequently subject; these peculiar morbid changes, no doubt, being the direct cause of the constitutional excitement commonly present in this form of the malady.

Symptoms.—This disorder will usually have been going on for some days previous to the patient's coming under treatment, at which time the symptoms will generally consist in frequent purging of fluid or thin fœcal matter, with a large proportion of mucus, and some traces of blood *mixed up* in the fœcal mass, if consistent, and not distinct from it, as is the case when the blood emanates from the hæmorrhoidal vessels. The colour of the evacuations will commonly be of a dirty brown, or a pale orange tinge, and they will either be fluid, or very thin fœces, of a pasty, pulpy, or frothy consistence, like yeast; and they will vary from one to the other of these degrees of consistence from time to time. During the day the patient will have probably five or six stools; but in the night, and between two and five o'clock in the morning, he will most likely be purged as many as eight or twelve times, the stools at this time being fluid, of pale brown or sand colour, each being followed by the expulsion of a small quantity

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of mucus and blood, and attended by tenesmus. A gnawing pain of the belly will be very constant, with occasional severe griping, particularly just previous to each call to stool; the patient's countenance will be changed, and he will be looking thin, and out of health; the pulse will generally be frequent, and weak, skin relaxed, hand wet, cold, and clammy, tongue foul and moist, or at other times there will be fever, hot harsh skin; dry, white, or very red tongue; burning sensation of the hands and feet, and febrile restlessness; a loathing of food, or a very depraved appetite, with tympanitic belly, flatulence, etc. etc. The belly will be generally tender, but more particularly so in the course of the transverse colon, and over the cæcum.

Where the disease is not arrested before morbid change of structure takes place in the mucous membrane of the colon, the irritative fever will become urgent, and symptoms of a low typhoid character will supervene, accompanied by

exaggeration of the dysenteric symptoms, irritation of the bladder, etc. etc. ; or he will rapidly become emaciated, and sink, from exhaustion.

AUTOPSY. The body is usually much reduced from its original size, and the features are shrivelled ; the abdomen is commonly distended, but in some cases of long standing it is flattened or sunk in. On opening the abdomen, the omentum, mesentery, and small intestines, present the unhealthy pink, or livid colour, noticed as existing in the acute form, only in a fainter degree ; and have the same unnatural opacity which generally prevails. The colon is not distended ; on the contrary at the transverse arch it has frequently a contracted and puckered appearance ; it usually has a leaden, and at certain portions a mottled hue.

Laying open the line of intestines, the colon will generally be found somewhat thickened at

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the cæcum, turn of the transverse arch, and sigmoid flexure, but not remarkably so at other portions. The mucous membrane throughout this gut will bear evidence of disease, in its being of a more villous construction than natural, being either generally or partially inflamed, of a red or purple colour, with patches of increased congestion at particular situations. It frequently happens that at the three situations mentioned as most impaired by the disease, the mucous membrane is changed in structure, so as to present a granulated surface; at other times it is studded thickly with minute ulcers, so as to give it a honeycomb-like appearance; each indentation being recognised as a distinct ulcer, on placing the gut in water, or viewing it through a magnifying glass. But the more common result of this particular form of the disease, is the formation of large distinct ulcers, with elevated hardened edges, several of which are found occupying the cæcum and first few inches of the ascending colon, and again just at the right turn of that

intestine, and extending through greater part or the whole of its transverse arch, and sometimes through the descending portion; these ulcers having very much the perceptible character of a true syphilitic chancre, (on a large scale,) and from some of them may sometimes be traced, inflamed cord-like absorbents, proceeding to indurated, or even occasionally, though rarely, suppurated mesenteric glands, just as a sympathetic bubo at the groin is observed to succeed an ulcer on the glans penis.

The rectum and sigmoid flexure are inflamed, thickened, and spongy, and at times ulcerated.

When the disease is independent of organic affection of the liver, or other important viscera, the small intestines are free from further implication, than an extension of redness for a foot or two in length up the ilium.

Treatment.—The treatment of this state of the disease will be a mere modification of that recom-

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mended for the acute form. The only indications of the degree of severity of the existing inflammation that can be depended upon, are the character of the stools, and the intensity of the pain and tenderness on pressure over the colon. Where the evacuations contain blood, and mucus, there can be no doubt but that the mucous membrane is highly inflamed; and consequently under such proofs, as well as where the patient is feverish, a general bleeding will be necessary, and will, or will not, require repetition, as these symptoms disappear or continue. More commonly, however, general bleeding is not requisite, and the daily application of leeches to the anus, and over the tender parts of the belly, until nothing more than a dull soreness remains on pressure, will be sufficient.

The alimentary canal must be completely cleared, by a dose of calomel and Ext. of colocynth, followed by an ounce of castor oil, or a drachm of compound jalap powder, or some compound senna

mixture; and this having been satisfactorily effected, five grains of blue pill, with two of ipecacuanha, and three of Ext. of hyocianus, or a sixth, or quarter of a grain of opium, should be given every four hours, until the bloody and mucous appearances are no longer detectable in the evacuations, or until the gums become slightly touched. On *either* of these occurrences the blue pill should be diminished in quantity, or be altogether omitted, and ten grains of Dover's powder at bed-time substituted; a purgative being administered every second day.

When all symptoms have subsided, saving a soreness on pressure at the cæcum, or transverse colon; counter-irritation should be established over the uneasy part. A mild alterative should be given at bed-time, and a tea-spoonful of equal parts of carbonate of magnesia and sulphur, with five grains of carbonate of soda, and two of ginger, every morning early. Or an occasional laxative, and some tonic may be allowed at forenoon

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and afternoon, with advantage ; of course all casual occurrences must be attended to on their appearance. The diet will require precisely the same restriction as in the acute form, and a flannel dress and patee will be as necessary ; and an occasional warm bath will assist in keeping up a free circulation in the skin.

DYSENTERY OF THE RECTUM.

We sometimes find that without any indications of disease in the upper part of the colon, the rectum becomes acutely inflamed. This affection, which is more painful than dangerous, is occasionally brought on by the same causes as dysentery, but it is also very frequently produced by certain irritating articles of food or drink, which in certain peculiar states of constitution have this effect. Thus I have known this disease,

and also irritable bladder, brought on by drinking champagne on several successive nights; it is however almost invariably co-extant with a loaded alimentary canal; and a state of plethora of the mesenteric vessels.

The symptoms are, a distressing sense of burning at the rectum, with incessant desire to stool, and uncontrollable determination to strain violently when at stool. Excepting when the natural evacuations are passed, the matter expelled from the rectum is glairy mucus mixed with blood, generally in quantity of one or two table-spoonfuls at each call. The bladder sometimes sympathises with the rectum, and irritability, or a retention of urine is occasioned; the tongue is generally foul, and there is slight febrile excitement.

The treatment is, to effectually evacuate the intestinal canal, and ungorge the mesenteric vessels by a full dose of calomel and colocynth, followed

by castor oil, or compound jalap powder, and to apply leeches to the verge of the anus. As palliatives, an injection of cold water, or an enema of fifteen grains of superacetate of lead, and forty or sixty drops of laudanum in two ounces of water (it being retained as long as possible) afford relief. At other times sitting over hot steam, or fomentations, are of temporary advantage, or a suppository of belladonna, or opium and lead, mixed in a little lard, or small mucilaginous enemata of starch, thick congee, or gum accacia, with opium, etc. etc. But all these merely soothe, and will seldom be of much avail in curing the disease, unless the alimentary canal be previously freely cleared, and the abdominal and hæmorrhoidal vessels are unloaded.

If much febrile excitement prevails, general blood-letting may be necessary ; but I have never seen a case in which the means I have before adverted to have not superseded the necessity of taking blood from the arm.

I have had no opportunity of examining an instance of this disease after death, as I never had a case that terminated otherwise than favourably ; but the symptoms of the disease are sufficiently indicative of its nature.

DYSENTERY IN CHILDREN.

Dysentery seldom presents itself under more distressing circumstances, than it is occasionally observed to do in infancy, and childhood. It is indeed a pitiable sight, to witness the agonies which the little sufferer endures during the course of the disease, and the deplorable state of emaciation to which children are sometimes reduced by this exhausting malady.

Dysentery, in childhood, is usually of the acute character, and is frequently produced at this early age, by the same causes which give rise to the complaint at a more advanced period of life ; viz. the suppression of the natural action of the skin, and other secreting organs, from exposure, or from sudden vicissitudes of the atmosphere. But when it takes place at as early an age as the second year, it is more generally either dependent on dentition, or is the result of premature weaning, or of the injudicious introduction into the stomach of food, quite inconsistent with the natural powers of the infantile digestive organs ; and which, instead of nourishing the child, acts as an irritant, and gives rise either to dysentery, fever, convulsions, or some other serious consequence.

The treatment of acute dysentery in childhood, should be conducted on precisely the same principle as that recommended for the treatment of the complaint in adults ; with such modifications,

as the age of the child, or the particular cause of the disease, may dictate.

Where the complaint occurs during the teething period, it will be of the utmost importance that the gums should be daily, freely lanced. Where the disease may appear to have arisen from too early weaning, it will be advisable either to restore the mother's milk to the child, or that of a wet nurse. In case the child cannot be prevailed upon to return to the breast, which is not an unfrequent occurrence after having been weaned some weeks, Asses' milk should be substituted, and all heavy, indigestible food, abstained from.

For medicine; small doses of calomel, ipecacuanha, and prepared chalk, in the proportion of a quarter, or half a grain of the two former, and from three to five grains of the latter, or from three to five grains of Hydrarg: \bar{c} cretâ, with from a quarter to half a grain of ipeca-

cuanha (as the symptoms may demand) may be given three times in the day, followed in the morning by a dose of castor oil. An injection of starch, gruel, or congee, is sometimes useful in allaying griping, and relieving distension of the bowels, and tenesmus.

Opiates should be most scrupulously avoided ; as at this irritable period of life, there is a tendency to determination of blood to the head, and this appears to be particularly the case in warm climates, which is sufficient reason for eschewing their use, during infancy.

A flannel dress, the warm bath, etc, etc., will be necessary adjuvants.

After the first two or three years of age, and during the subsequent period of childhood, the disease will require to be met by more energetic measures. Local bleeding, repeated until abdominal pain and tenderness have subsided, and until

the stools have ceased to contain blood, will be requisite; and it will be necessary to administer more active quantities of medicine. Calomel, in doses of from one to two grains, combined with from half to one, or even two grains of ipecacuanha, (according to the age of the patient) with four or five grains of prepared chalk, should be given three times in the day; and at bed-time, three or four grains of calomel, with one or two of ipecacuanha, (or as much as the stomach will bear without exciting vomiting) and these remedies should be followed in the morning, by a dose of castor oil; the diet being confined to thin sago or arrow root.

This treatment should be continued until the acute symptoms have declined, which will be indicated by the evacuations ceasing to contain blood, or bloody mucus. As soon as this desirable object is attained, the more active remedies may prudently be changed, for small doses of the Hydrarg : ̄ cretâ, ipecacuanha, and chalk, given

at intervals of four or six hours, and a moderate dose of oil should be administered every, or every other, morning, until all inflammatory action has subsided, and healthy secretions are established. After these a mild course of aperients, or an occasional dose of castor oil, will be all that is necessary in the way of medicine, to complete the cure; but to guard against a relapse, the most strict attention to diet, will be absolutely requisite for a considerable time.

During the treatment, occasional emollient injections, the warm bath, fomentations to the abdomen, a flannel dress, etc. etc. will assist in the cure, and afford great comfort. Where tenesmus is distressing, and the head is not likely to be affected by its use, an anodyne enema, adapted in strength to the age of the child, may be administered; but the use of opium in any form, is not advisable, until after teething has been fully completed.

As before remarked, there are certain constitutional conditions, in which the use of mercury would be inadmissible, particularly in infancy or childhood, and in which we must of necessity have recourse to ipecacuanha alone, or some other remedy than mercury. But these instances are mere exceptions, and as a general practice, I may with confidence assert, that the treatment I have advocated, is a successful one; and that its advantage over the ipecacuan treatment alone, is in childhood, quite as decided, as it is in the adult patient.

In these brief and general remarks on the treatment of dysentery in childhood, which period of life may be said to extend from birth, up to about the sixth or eighth year of age, I must not be misunderstood as alluding to the various deranged states of the bowels which properly come under the head of "Diarrhoea," which are of such common occurrence during teething, and which usually yield to soothing and astringent remedies,

purgatives, lancing the gums, and such like milder course of treatment, than that which I have described in this chapter ; and which practice is only intended to apply, to that more formidable and fatal type of disease, universally known as “Dysentery.”

CHRONIC DYSENTERY.

SECTION IV. Chronic dysentery as it occurs in India, will require to be considered under two heads; namely—that low state of inflammation which is found to linger on as the remnant of an acute attack of the disease, by which the structure of the parts involved has been somewhat altered, and by which the tone and natural functions of the vessels have been impaired; leaving a condition more of irritability and congestion, than

of inflammation: and secondly, that *Dysenteric Diarrhœa* state, if I may be allowed so to call it, which is very frequently met with in persons who have been long resident in a hot climate, and whose digestive organs and general health are much shaken, in consequence.

In the first description of the disease, the patient will generally be much emaciated from long indisposition. The abdomen will be either sunk, and the integuments have a dry leathery feel, like a mummy, or the belly will be distended with air, and be quite tympanitic: there will be a general soreness of the bowels, but on pressing deeply into the right iliac region, acute tenderness will be elicited, as also across the upper part of the belly, in the course of the transverse colon. He will have low, irritative fever; a small quick pulse, a parched mouth, a very red beet-root-coloured, or a white dry tongue, and harsh skin. Frequent purging, particularly at night, and early in the morning; the evacuations varying in consis-

tence from very thin fœces, to a pultaceous, or frothy substance, as if in a state of fermentation, containing mucus, and occasionally streaked or mixed with blood; or the stools will be fluid, of a pale yellow, or dirty brown colour, with fæcal sediment; and probably a few drops of bloody mucus, expelled at the termination of each dejection.

AUTOPSY.—The body much emaciated, the abdomen either distended by flatus, or else retracted, so that the lumbar spine forms a prominent projection at its centre.

On opening the abdomen, the general appearance of its contents will be of an unwholesome character. The omentum and mesentery of a pink or a livid hue shrunk up, and devoid of fat, the small intestines will be very thin and transparent, like a thin-husked white grape; the colon contracted and puckered up, having a dark mottled appearance. The great viscera will be shrunk in size, and shrivelled in appearance. In fact, the whole

contents of the abdominal cavity will seem to have equally shared in the general emaciation.

On cutting open the alimentary canal, the parietes of the colon will be found thin, and sodden, but the villous coat will be throughout hypertrophied, its papillæ having an erect, rough appearance and feel, and being of a dark red, or purplish hue, with here and there, livid patches of congestion, particularly at the caput coli, and transverse arch of the colon; at which situation small ulcers are not uncommonly observable. The sigmoid flexure is often very much contracted, and the villous coat at this part of the intestine is generally of unnatural thickness, and inflamed, as well as at the rectum.

The lining membrane of the small bowels, will for some way up the lower part of the ilium, be much in the same state as that of the colon, and occasionally little ash-coloured spots, or small superficial ulcers will be found at the lowest one

or two inches of the small intestine, but this is of rare occurrence.

Treatment.—The treatment to be pursued in this form of chronic dysentery, will be first, such as is calculated to allay irritable inflammation, and subsequently, that which may give tone to the enfeebled parts, and elicit healthy secretions from the viscera generally; for these purposes a few leeches should be daily applied over any part of the abdomen which may appear tender, and the belly should be fomented at intervals; an occasional hot bath should be advised; and a flannel dress, including a flannel patee, are indispensably necessary. As internal remedies, five grains of blue pill, with three grains of ipecacuanha, and as much extract of hyocianus; or a quarter, or a sixth part of a grain of opium, should be administered three times in the twelve hours; and one ounce of castor oil, or a dose of jalap, rhubarb, and carbonate of magnesia, each ten grains, should be given every second or third morning.

When the uneasiness of the abdomen, has become a mere sense of soreness, leeching may be discontinued, and counter-irritation should be established over the most tender portions of the belly, which will invariably be, either the right iliac region, or in the course of the transverse arch of the large intestine. As soon as the stools are devoid of blood, the treatment may, with advantage, be changed to one of an alterative tonic character; such as, (to commence with) Hydrag. ccretâ.—Sodæ Carb : Pulv : calumbæ, each gr. v. Pulv : Zingiber, gr. ij. every night or morning, and a tonic aromatic bitter at forenoon and afternoon. If these remedies have little or no good effect, they may be changed for some of the preparations of iron, the superacetate of lead, the nitrate of silver, the nitric, or muriatic acids, etc. etc., all of which medicaments are to be combined with a certain quantity of opium, and may in their turn prove efficacious. But the remedy of this class, from which I have observed the greatest and most frequent good to follow, has been the sulphate of

copper in conjunction with opium : for the introduction of which into practice, we are indebted to that very able and observant physician, Dr. Elliotson. Experience has taught me not to prescribe this remedy when any indications of acute inflammation are present, such as bloody slimy stools, or acute abdominal tenderness ; but where the disease has seemingly devolved into a low inactive condition, I have very frequently used it with the most satisfactory results. Its administration, however, requires to be judiciously managed, and to be cautiously adapted to the temperament of the patient, and to the particular character of the prevailing inflammation ; and consequently, it will require the practitioner to "watch his way" in prescribing it, for I have frequently observed, that a rather large dose, that is, from half a grain to a grain, given at first, has produced much abdominal uneasiness and griping ; when in the same individual, a smaller quantity, say the sixth or even the eighth of a grain, gradually increased, has had the desired effect.

I consequently now, seldom commence its use in larger doses than one-sixth of a grain, with one quarter of a grain of opium, and three grains of the extract of chamomile, cinchona, or catechu, increasing the quantity of sulphate of copper gradually every second or third day, until the weight given at each dose arrives at two and half, or three grains, with one grain of opium, which with some of the other ingredients mentioned, is administered three times a day. Under this course of medicine, with a well regulated diet, I have frequently seen patients recover from a deplorable and almost hopeless state of emaciation, and become quite robust, and in some instances, unusually stout. I have frequently, with equal advantage, administered this remedy to natives of India, labouring under chronic dysentery, which with them is a very common form of the disease. But with respect to the quantity of opium to be combined with each dose, it is necessary previously to ascertain, if the patient is in the habit of eating "the drug," for

I have known some native gentlemen take as much as "two sicca weight;" that is, *six drachms of solid opium a day*, as a constant practice. Indeed I can at this moment call to mind several fine, robust, healthy natives, who as a matter of practice, in order to string their nerves up to concert pitch, swallow three times a day, a ball of solid opium weighing from twenty to twenty-five grains. In answer to the question, what effects they experience from it? they say, that it "makes them feel confident and comfortable, whereas without their accustomed quantity at regular intervals, they should be nervous, and good for nothing."

When all dysenteric symptoms have passed away, and an enfeebled state of the parts affected by the disease, and a sluggish action of the secreting functions only remain, a mild alterative pill given every night, and a glass of compound infusion of gentian or chiretta, with a couple of grains of quinine at forenoon and afternoon, and an

occasional mild aperient, will generally terminate the physician's labours. Where it can conveniently be obtained, change of air after a long attack of illness is very beneficial.

With respect to diet, it should throughout the treatment be of the most light and digestible nature, principally farinaceous at the commencement, but during convalescence, when all inflammatory symptoms have disappeared, a more solid regimen of animal food, with a little wine, beer, or porter will be admissible. Great caution however against over-eating must be observed during the progress of recovery, when the appetite becomes so craving, that the patient has little controul over himself. I have known an Hospital patient quite convalescent after dysentery, devour a whole pound of sausages, which had been given him by some injudicious friend, at one meal; the consequence of which was, he died ten or twelve hours afterwards, of inflammation of the bowels.

Easy as it is to lay down rules for medical practice, it will not always be found practicable to follow them, and most physicians will I think agree, that there is scarcely any known complaint, that requires a greater diversity of treatment than chronic dysentery. I have in this essay abstained from introducing cases, which are generally too tedious for perusal, and are of little value; for after all, they only exemplify one or two leading points occurring under particular circumstances; and in a disease like dysentery, almost every individual patient will require a modification of treatment, adapted to his peculiar constitution, and to the existing stage of the disease. In order, however, to show the tedious and harassing nature of some cases of this disorder, and the necessity for resorting to a great variety of remedies before we succeed in obtaining one that is of permanent benefit, I will copy, in an abridged form, the following example.

A female named Wade, of slight make, æt. 45

years, of rather intemperate habits, was admitted into the General Hospital in October 1830. She was emaciated, and reduced in strength, from having had dysentery on her for a month, and on presentation, complained of frequent purging, attended with griping; the stools consisted of very thin pale yellow fœcal matter, mixed with mucus and blood in small quantity; there was slight tenderness at the transverse colon, pulse small and soft, eighty-eight in a minute, skin natural, but the tongue red, as if scraped raw.

A few leeches were applied over the tender part of the belly, and fomentations resorted to, and she took on admission—

Calomel, gr. x.

Pulv : Ipecac : gr. iv.

And after six hours—

Ol : Ricini ℥j.

On the second day after admission, the stools were of thin fœces, with some mucus, but no

blood, and she had less griping; but the belly was still tender at the right hypochondriac region, and in the course of transverse colon.

A blister was applied over the tender part of the abdomen.

Cupri Sulph : gr. ss.

Pul : Ipecacuan : gr. ij.

Opii gr. ss.—three times a day.

During the three succeeding days from commencing the use of the sulphate of copper and opium, the purging was less frequent, and other symptoms not exaggerated, but on the fourth day she complained of much griping, and had as many as ten or twelve stools in the twenty-four hours. The last prescribed medicines were omitted—and

Hydrarg : \bar{c} cretâ. gr. v.

Pul : Ipecac. : gr. ij.

Ext : Hyosciam : gr. v.—ordered to be given three times in a day, and a dose of astrin-

gent mixture, of chalk, kino, etc. etc. after each evacuation.

These remedies were administered for four days without any amendment in the state of the patient.

Argent : Nitrat : gr. i.

Opii gr. i.

Pulv : Ipecac : gr. ij. every four hours !

(Continuing the astringent mixture), were next resorted to, and she continued to take these medicines regularly, and with apparent advantage, for three days, when the stools became more frequent, and severe griping was experienced.

Castor oil, ℥j.

was administered. After the operation of which the nitrate of silver was again tried in increased quantity.

Argent : Nitrat : gr. iss.

Opii gr. i.

Pulv : Ipecac : gr. i.

three times a day.—And one ounce of the astringent mixture, after each occasion.

She continued this prescription for four days, during the last two of which she had only three and four stools in the twenty-four hours, unaccompanied by either tormina or tenesmus; but on the fifth day, purging returned with increased frequency, accompanied by severe griping, which was particularly urgent, half an hour after the administration of each dose of the nitrate of silver. The medicine was consequently discontinued—and

Pulv: Ipecac: gr: iiij.

Opii. ——— gr: i.

Ext. Gentian gr: iiij.

Given every four hours. Two ounces of decoction of pomegranate, with kino, after each stool, and

Argent Nitrat: gr. viij.

Tinct: Opii. ℥i.

Aquæ ℥viij.

as an enema. Was pumped up the rectum, three times in a day.

These remedies were continued during two days, without advantage; the purging (which was of pale yellow fluid) increased in frequency, and was attended with much griping; the abdomen was also distended, and tender. The remedies were suspended, and castor oil, $\mathfrak{z}\text{i}$. administered.

On the following day the pills of sulphate of copper and opium were again resorted to, and their use continued during nine days with some benefit; the dose of sulphate of copper in that time having been increased to two grains, with one and half grains of opium, taken three times in the day. On the tenth day, the medicine seemed to have ceased to be of any service; the purging had increased during the two last days, and the patient now had twelve pale yellow watery evacuations in the twenty-four hours, accompanied with slight griping.

Being rather at a loss for a remedy, I now prescribed

Acid : Muriat : Dil : ʒi.*

Tinct : Opii. gtt : xv.

Infus : Calumbæ. ʒij.

to be administered three times a day.

P. M. "The patient has had *no stool* from the time she took the first dose of the muriatic acid ! ! !"

*

The medicine was continued, during the ensuing night she had but two stools, and through the following day, not any.

Medicine continued.

The patient continued the muriatic acid draught, of the same strength, without taking *any other* remedy for eleven days, during which time she

* The acid was diluted so as to leave the draught as acid as the patient could take it, without excoriating the fauces.

never passed more than from two to three evacuations in the twenty-four hours.

The acidity of the draught was now somewhat decreased, and in this milder form she persisted in its use for six days longer ; or in all, seventeen days from the commencement of its administration. During the latter period, she had but one perfectly healthy dejection in the twenty-four hours, and her general health was sufficiently re-established, to admit of her being discharged from Hospital as cured.

At the foot of the Diary, I had inserted the following remark.—“ All the different remedies used in this tedious case, seemed to have had beneficial effect for a very short time only ; with exception of the muriatic acid, the salutary action of which was *immediate*, and continued so without fluctuation. So far from occasioning griping, as I expected it would have done, it relieved the previous uneasiness experienced, as well as a

slight degree of tenesmus which prevailed, when it was first prescribed.”

It is worthy of notice, that this woman's husband was a patient in the Hospital at the same time with herself, labouring under diarrhœa, but his bowel affection was complicated with, and probably symptomatic of, organic affection of the spleen, and liver. I however tried the muriatic acid on him, in the same form as it was given to his wife, but there was evidently no physical conjugal sympathy existing between them, for it produced excessive giddiness, and unpleasant sensation in the head, as well as severe griping, which rendered it necessary to discontinue its use.

DYSENTERIC DIARRHOEA.

The peculiar affection to which I have attached the name of Dysenteric Diarrhoea, is familiar to Indian medical practitioners, as occurring in subjects who have been long resident in a tropical climate, and is more to be attributed to general impairment of the constitution, than to any local organic disease; although it frequently happens, that the mucous membrane of the colon, becomes in this complaint the seat of congestion,

or of sub-acute inflammation, and a half dysenteric, half diarrhœa character of disease, is established.

In this state of the system, the patient will generally be very dyspeptic, and debilitated; and will complain of losing flesh, and of daily becoming more weak. He will look pale, and languid: the skin will be devoid of perspiration, and either feel smooth, and silky, or rough and mealy. The tongue will not have its natural colour, and will be quite pale, but it will usually be free from coating; the temper will be fretful, the appetite very fastidious; there will be a disrelish for society, a carelessness about things that were formerly interesting, and a state of despondency. The bowels will be irritable, and the patient will be purged often in the day, and more frequently in the night; the stool being generally pale yellow fluid, and passed without tenesmus. Very little tormina attend this affection, but there will be an uneasy sensation

of the bowels. The most peculiar circumstance attending this disease, is the great uncertainty of the symptoms. Sometimes the patient will feel tolerably well for weeks together, and during that time will have only three or four dejections in the twenty-four hours; when suddenly, and without any premonitory sensation, he will be seized with very frequent purging of pale fluid, accompanied by a nervous tremor, and sense of faintness, which induces him to believe that he has got an attack of cholera, or that he is dangerously ill. In an advanced stage of this affection the patient will sometimes become jaundiced.

More rarely, the stools in this disorder are of a somewhat dysenteric character, scanty, and containing a little mucus, and some traces of blood, and these conditions will occasionally alternate with each other; some tenderness being distinguishable at the cæcum, and across the upper belly, on pressure being made with the hand at these situations.

AUTOPSY.—I have had but few opportunities of examining the bodies of persons who have died from this exhausting disease, but the few that I have inspected, have exhibited more a state of exsanguinity than of morbid change of structure in any of the viscera.

The body has been emaciated, and devoid of the usual unpleasant smell of a corpse, the integuments and muscles of the abdomen have been retracted, and have felt tense, and hard.

On exposing the contents of the abdominal cavity in situ, the viscera generally, have had a shrunken and shrivelled appearance, were of very pale colour, as if devoid of blood, and have looked very much as if they had been macerated for some hours. On laying open the line of intestines, the mucous membrane of the colon has presented a very pale surface, with livid patches of congestion at certain parts of its course, and a rather velvety condition of the tissue throughout, but no decided

morbid changes of structure have commonly been detectable.

The small intestines, like the larger one, as well as the stomach, have presented no other unnatural indications than a want of colour, a velvety condition of the mucous membrane, and a flabbiness of structure.

Treatment.—When symptoms of a dysenteric character prevail, the treatment required will be precisely that recommended in the preceding chapter for chronic dysentery. Where, on the contrary, the malady is more dependent on general relaxation of the system, without local irritation, the practice will consist principally of tonics, and astringents; and it will be necessary to change from one medicine to another, as each remedy in succession loses its virtue.

I have used sulphate of copper and opium, and some of the preparations of iron, with temporary

good effect; and the superacetate of lead, and nitrate of silver, with less favourable results, but it would be useless to particularise the remedies that it will, from time to time, be requisite to resort to. It will be only necessary to add, that the sudden violent attacks of watery purging will require to be speedily arrested by a full dose of opium, repeated at no distant period, if the first dose has not been effectual; for patients in this state of health have no superfluity of strength.

The most deplorable circumstance attending this complaint is its fluctuating and changeable nature, sometimes leaving the patient comparatively well for many days or even weeks together, and thus holding out fallacious hopes of recovery. These apparently favourable vicissitudes, probably at some times depend upon atmospheric causes, and no doubt at others, on a reaction in the constitution, and although they must be considered so far satisfactory, that they show that there is some remaining energy in the system,

yet they have the objectionable moral effect, of dissuading the invalid from availing himself of the only chance of recovery, in a *change of climate*. Until, as it so frequently happens, the time has gone by, when such change will be attended with the anticipated beneficial result.

I will conclude this dissertation, by introducing a short paper on the treatment of chronic dysentery with sulphate of copper and opium, which I presented to the Medical and Physical Society of Calcutta in 1833, and which was published in the seventh volume of the Transactions of that Society.

CASES OF CHRONIC DYSENTERY TREATED
WITH SULPHATE OF COPPER AND OPIUM.

“ There are few tropical diseases more harassing to the patient or physician, than those sub-acute conditions of the mucous membrane of the large intestines, so often the sequela of acute dysentery, and so much more frequently idiopathic, in constitutions which have long been subjected to the

effect of a hot climate, comprehended under the very general appellation "Chronic Dysentery," a term made use of, with little discrimination, in designation of various grades of inflammation, which in practice require the nicest distinction.

The symptoms of the disease and appearances after death are such, as to enable us to pronounce, without hesitation, that dysentery, at any stage, is inflammation of the mucous membrane lining the large intestines: the unnatural appearances met with in the immediately adjacent structures being attributable to the local affection. Such for instance as enlargement of the mesenteric glands, opacity, and deposit of coagulable lymph between the folds of peritonium, and the extension of redness for a short way up the smaller bowels, for in no instance, of a large number that I have carefully examined, have I discovered the ulcerative process to be continued into the ilium.

Although dysentery is sometimes co-existent

with affections of the liver, or other viscera, such complicated states of disease cannot be classed under the head of simple dysentery, nor could we with more propriety consider the two diseases as dependent one on the other, than common diarrhoea with affection of the lungs, merely because the former is an attendant on some morbid conditions of the latter. Entertaining this view of the nature of the disease, we may feel satisfied that inflammation assumes as many different characters and gradations, in the mucous lining of the colon and rectum, as in a similar tissue elsewhere situated, gives rise to exactly similar results, and calls for an equally exact definition, and the same modifications of treatment. How truly absurd and unscientific then, does it appear, to attach to any one medicine, the property of a specific, in a malady so varying in its forms, that whilst at one period rigid antiphlogistic measures are demanded for its relief, at another the most opposite remedies are found to be essentially beneficial.

Our diagnosis in this disease is very imperfect, and we are in possession of but scanty means of deciding on the actual condition of the parts involved, or the changes which are from time to time taking place. There are few symptoms which may be considered, strictly speaking, as peculiar to dysentery. All will admit the necessity of taking into consideration every deviation from health, in endeavouring to form a correct judgment of the state of the patient; but those who have seen much of the disease, will have come to the conclusion, that the sympathy of the system with the local derangement is very irregular, and little to be depended on as a guide to our treatment. I know but of two indications which may be relied on as generally leading to a satisfactory conclusion,—the appearance of the ejected matter per anum, and the seat and degree of severity of the abdominal pain and tenderness; each of which, however, is occasionally deceptive. But although we may not be able to decide on the exact extent to which the disease has pro-

ceeded, we may usually form a tolerably correct idea as to the character of the existing inflammatory action, although we may not, in our present ignorance, be able to connect prevailing symptoms with the more delicate changes that are taking place, or have recently occurred. Observation has so far instructed us, that we usually can, from a history of the complaint, form some opinion as to the probable extent of mischief. Not entering on a particular description of the morbid changes recognised as the result of sub-acute forms of dysentery, I may briefly remark, that we usually find in our post-mortem examinations proof of inflammation having been the essential nature of the disease :—a thickened pulpy mucous membrane of pink or purplish hue, with or without ulceration, varying in extent and appearance, effusion of lymph between the coats of the gut, enlargement and induration of the glands in the vicinity. In other cases (generally protracted ones), the parietes of the intestine appearing to have participated in the general

emaciation, the gut very thin, its mucous membrane pale, velvety, and as if it had been macerated in fluid for some time, with here and there traces of vascularity, ulceration, etc. etc. Now it is in these particular stages of the disease, so differing in character from the more acute forms, that we derive advantage from astringents, and particularly from the sulphate of copper in combination with opium, a remedy for the introduction of which into practice in this complaint we are indebted to that very scientific and independent physician, Professor Elliotson. An extensive trial enables me to bear testimony to its truly magical effects, often, under the most unpromising circumstances, both in European and Native constitutions: much however as I appreciate the virtues of this medicine, I find, like most others, its administration must be guided by judgment, and restricted to particular stages of the disease. I must respectfully dissent from Dr. Elliotson in the opinion of its being applicable to the more acute forms.

I cannot concur with the learned Professor in recommending its use, when evidences of the existence of acute inflammation are so decided as was the case on some occasions in which he prescribed it, as stated in "The Lancet," (a publication to which the exiled medical practitioner is most especially under obligation.) Pain and tenderness of the abdomen, together with bloody mucous stools, in my opinion contraindicate the adoption of the practice, and demand a strictly antiphlogistic treatment, continued until every trace of acute disease has been dispelled.

I have endeavoured to collect some distinguishing signs whereby to decide on the time, and state, at which we might expect advantage from using the sulphate of copper and opium; and although I am not prepared to offer any positive rule for guidance, I think I may assert that, I have found this medicine most beneficial in cases where the evacuations were of a pultaceous or pulpy consistence, as if in a state of

fermentation, and where they were fluid and of pale colour : in those instances in which a mahogany or beet-root-coloured tongue has been a remarkable symptom, I have invariably found it of great service ; as also where the tongue has been unnaturally deficient in colour and soft in structure. Tenderness and soreness in the course of the colon, if not acute, as where the disease has been of long standing, constitute no objection to the administration of this remedy ; but where these symptoms are accompanied by evacuations of bloody mucous description, which are the positive indications of high inflammatory action, I presume in this climate at least, it would be hazardous to pursue any other than an anti-inflammatory course of practice.

In cases subjected to the treatment with sulphate of copper and opium, there is, after a time, a disposition to indolence on the part of the intestines, and deficiency of the natural secretions of the bowels ; the fœces become of rather

a clayey consistence, and are not freely carried off. I have therefore found it advisable to administer occasional mild laxatives, but only in such quantities as were considered just sufficient to unload the canal, without producing purging; castor oil, infusion of senna and sulphate of magnesia, or sulphur, usually have the desired effect, without irritating the bowels; and an enema is often of advantage: a course of mild alteratives at night, followed by a chalybeate in the morning, is sometimes required to restore the regular action of the alimentary apparatus after the dysenteric affection has been cured. Warm clothing, and particularly a flannel patee and stockings, are indispensable in every state of dysentery: the former (the patee) should ever constitute part of the dress of a resident in warm climates, and once adopted, never omitted to be worn; a bland diet should generally be adhered to, but in cases where little irritability of the bowels exists, soft solid food often agrees better. A judicious allowance of port wine or beer is

occasionally called for, but only under circumstances of extreme debility and prostration.

During the use of the sulphate of copper, where there is soreness on pressure at the cæcum, or any part of the colon, the daily application of a few leeches, followed by counter-irritation, very much assists in the cure; in delicate persons the use of a stimulating liniment, or the emetic tartar ointment, continued so long only, as to produce redness of the cuticle, is preferable to the more severe effect of the emetic tartar plaster, until pustules are occasioned, or the common blister, and is never objected to by the patient.

The following abridged cases of Europeans are taken promiscuously from a large number treated on the same principle, and in a great proportion of instances with equally good effect: the patients of the Hospital of the Calcutta Native Militia have afforded me ample opportunity of

trying the practice on the natives of Bengal, who are particularly subject to dysentery, which even from its commencement assumes but a very sub-acute disposition; and with the most satisfactory results.

Case 1.—A delicate female, æt: twenty years, had bowel complaint five months. General health much impaired, and she is emaciated and weak. The dysenteric symptoms are, tenderness at right iliac region, and in course of transverse colon; frequent scanty stools composed of mucus and blood.

Treatment—mild antiphlogistic. .

After a fortnight, soreness in course of colon remains; passes nine stools at night and four or five in the day, of pale frothy matter like yeast. Tongue has an unnaturally red colour, like beet root.

Prescribed,—Cupri: Sulph: gr. ss.

Opil: gr: ss. ter die.

Produced griping and tenesmus; the quantity of copper reduced to

Cupri : Sulph : gr. $\frac{1}{4}$ th.

Opii : gr. ss. ter die.

This prescription taken without inconvenience for three days, at the expiration of which time passed four stools at night and one in the day.

Cupri : Sulph : gr : ss.

Opii, gr. ss. ter die.

No uneasiness from the increased dose of copper. After three days further use, had only two stools at night, of thick consistence and pale colour. She continued to take the same prescription (3ss. of castor oil now being administered every fourth day,) for fourteen days; at the end of this time, passed only one natural evacuation in twenty-four hours. Medicine discontinued. Remained well.

Case 2d. A man, æt: 26; six years in India, during the whole time subject to bowel complaint.

Has laboured under his present attack of dysentery ten months. Reduced to an extreme state of emaciation and despondency; he passes from twenty to thirty light coloured stools, with a mixture of greenish and reddish matter, and of frothy consistence, during the twenty-four hours, attended by tenesmus; there is tenderness in the course of the colon, particularly at the cæcum, and first bend of the transverse portion. His tongue is of mahogany colour; has prolapsus ani.

Bowels evacuated by a dose of oil, and domestic lavement.

Following day, June 3rd, 1832.

R. Cupri : Sulph : gr. ss.

Opil : gr. i. ter die.

And emetic tartar plaster over the right iliac region.

12th. Only four stools in twenty-four hours.

26th. Flatulent ; passed seven frothy stools.

Injection and castor oil.

27th. Cupri : Sulph : gr. i.

Opii. gr. i. ter die.

July 1st. Two stools in 24 hours.

10th. General health wonderfully improved ; two stools in twenty-four hours, still of pulpy consistence.

Cupri : Sulph : gr. iss.

Opii. gr. i. ter die.

20th. Becoming stout : one stool in twenty-four hours. Tongue of tolerably natural colour ; tenderness of the belly has entirely left him, and prolapse of rectum relieved. Discontinued the medicine.

August 1st. Suffers from flatulence, and costiveness.

R. Pil : Hydrarg.

Pul : Ipecac. aa gr. i.

Pil : Rhei. Comp : gr. iii. O. N.

R. Infus Sennæ.

Infus : Gentian. Comp. āā ʒiss. O. M. .

He continued in Hospital through August, when he was discharged in robust health.

The two foregoing were extreme cases, which had been for a long period under scientific treatment, and well regulated diet, and course of life, without benefit; consequently no credit is to be attached to a change of habit or diet, which in the next case may have had some share in the cure.

Case 3d. A soldier, æt : 30. Had dysentery four months, generally eight or nine stools in the day, and four or five at night : emaciated, features puckered.

Pulse feeble ; skin unnaturally cool and blue ; no tenderness at any part of the abdomen, the in-

teguments of which are shrivelled, and feel like leather. Tongue of beet-root colour.

A dose of oil, evacuated several frothy light coloured stools.

Cupri : Sulph : gr. ss.

Opii. gr. ss.

Ext : Gentian. gr. iii ter die.

After three days, had but one stool in twenty-four hours, of yellow natural fœces : during the subsequent ten days, passed one or two stools in twenty-four hours, and regained a healthy appearance.

Case 4th. An old man, twenty-five years resident in India, has had dysentery for fourteen months, and taken various remedies without benefit ; there is slight soreness at the cæcum, transverse colon, and in the situation of the sigmoid flexure. Stools frequent ; twelve or fourteen at night, and two or three in the day : he has within

the last few months become much emaciated and weak : the stools are fluid, of pale yellow colour ; the tongue pale and soft. *

Took,—Cupri : Sulph. gr. ss.

Opil. gr. ss. ter die.

For six days : stools less frequent.

Cupri : Sulph. gr. i.

Opil. gr. ss. ter die.

Continued for five days ; passes only three stools at night, and two or three in the day.

Cupri : Sulph : gr. iss.

Opil. gr. i. ter die.

Taken for nine days longer, when he was considered cured ; passing only one healthy fœcal stool in the day, none at night, and feeling quite well."

In the practical observations submitted in this work, the author entertains a hope, that he has advanced sufficient evidence to set at rest any discrepancy of opinion which may prevail in re-

ference to the seat, and nature of dysentery: and that to a certain extent, he has assisted in clearing away the obscurity in which the diagnosis of that fatal disease has hitherto been involved, (and to which he alludes in the remarks preceding the above detailed cases, which were written nine years ago.) Should he have succeeded in attaining such important objects, on which alone a scientific practice for the cure of the malady can be based, he will have no reason to regret having offered his notes to the profession.

THE END.

BISHOP'S COLLEGE PRESS.